

TÜV SÜD
ZERTIFIKAT ◆ CERTIFICATE ◆ 認 證 證 書 ◆ CERTIFICADO ◆ CERTIFIKAT ◆ CERTIFICATE



CERTIFICATE

No. QS6 071067 0007 Rev. 00

Certificate Holder: Liofilchem S.r.l.
Via Scozia
64026 Roseto degli Abruzzi (TE)
ITALY

Certification Mark: 

Scope of Certificate: Design, Development, Manufacture and Distribution of In-Vitro Diagnostic Medical Devices: Microbial Identification and Antimicrobial Susceptibility Testing Systems, Antibiotic Minimum Inhibitory Concentration Test Strips, Antibiotic Discs, Dehydrated and Ready-To-Use Culture Media, Plasma Protein Determination Kits

Standard(s): ISO 13485:2016

Regulatory Authority(ies): Australia TGA, Brazil ANVISA, Health Canada, USA FDA, MHLW / PMDA. See attached for listing of specific regulatory requirements.

The Certification Body of TÜV SÜD America Inc. certifies that the quality management system of the manufacturer listed above has been audited against the stated criteria and found to conform to those criteria for the scope of certification listed. Validity of this certificate can be obtained by visiting the website <https://www.tuev-sued.de/product-testing/certificates>

TÜV SÜD America Inc. is an MDSAP Recognized Auditing Organization.

DUNS No: 43-534-2134

Effective Date: 2019-03-11

Expiry Date: 2022-03-10

Page 1 of 3
Date of Issue: 2019-03-18

(Arie Henkin)
Manager, Certification Body MHS

TÜV SÜD America Inc. • 10 Centennial Drive Ste 207 • Peabody, MA 01960 USA • www.tuvsud.com



Italia

CERTIFICATO

Nr. 50 100 11497 - Rev. 003

Si attesta che / This is to certify that

IL SISTEMA QUALITÀ DI
THE QUALITY SYSTEM OF

LIOFILCHEM S.r.l.

SEDE LEGALE E OPERATIVA:
REGISTERED OFFICE AND OPERATIONAL SITE:

**VIA SCOZIA SNC - ZONA INDUSTRIALE
I-64026 ROSETO DEGLI ABRUZZI (TE)**

SEDE OPERATIVA:
OPERATIONAL SITE:

**CONTRADA PIANE VOMANO – TRAVERSA DI VIA GRECIA
I-64026 ROSETO DEGLI ABRUZZI (TE)**

È CONFORME AI REQUISITI DELLA NORMA
HAS BEEN FOUND TO COMPLY WITH THE REQUIREMENTS OF

UNI EN ISO 9001:2015

QUESTO CERTIFICATO È VALIDO PER IL SEGUENTE CAMPO DI APPLICAZIONE
THIS CERTIFICATE IS VALID FOR THE FOLLOWING SCOPE

**Progettazione e sviluppo, produzione e commercializzazione di
dispositivi medico diagnostici in-vitro: terreni di coltura per
batteriologia, sistemi di identificazione e antibiogramma, kit per la
determinazione di plasmaproteine (IAF 12, 29)**

**Design and development, production and sale of in-vitro diagnostic
medical devices: culture media for bacteriology, identification and
susceptibility testing systems, kits for plasma protein determination
(IAF 12, 29)**



SGQ N° 049A

Membro degli Accordi di Mutuo Riconoscimento
EA, IAF e ILAC
Signatory of EA, IAF and ILAC Mutual
Recognition Agreements

Per l'Organismo di Certificazione
For the Certification Body
TÜV Italia S.r.l.

Validità / Validity

Dal / From: 2019-02-11
Al / To: 2022-02-10

Andrea Coscia
Direttore Divisione Business Assurance

Data emissione / Issuing Date

2019-02-11

PRIMA CERTIFICAZIONE / FIRST CERTIFICATION: 2012-09-25

"LA VALIDITÀ DEL PRESENTE CERTIFICATO È SUBORDINATA A SORVEGLIANZA PERIODICA A 12 MESI E AL RIESAME COMPLETO DEL SISTEMA DI GESTIONE AZIENDALE CON PERIODICITÀ TRIENNALE"

"THE VALIDITY OF THE PRESENT CERTIFICATE DEPENDS ON THE ANNUAL SURVEILLANCE EVERY 12 MONTHS AND ON THE COMPLETE REVIEW OF COMPANY'S MANAGEMENT SYSTEM AFTER THREE-YEARS"



Certificate

No. Q5 071067 0006 Rev. 00

Holder of Certificate: Liofilchem S.r.l.
Via Scozia
64026 Roseto degli Abruzzi (TE)
ITALY

Facility(ies): Liofilchem S.r.l.
Via Scozia, 64026 Roseto degli Abruzzi (TE), ITALY
Liofilchem S.r.l.
Contrada Piane Vomano, Traversa di Via Grecia, 64026 Roseto degli Abruzzi (TE), ITALY



Certification Mark:

Scope of Certificate: Design and development, production and sale of in-vitro diagnostic medical devices: culture media for bacteriology, identification and susceptibility testing systems, kits for plasma protein determination. Distribution of other in-vitro diagnostic medical devices

Applied Standard(s): EN ISO 13485:2016
Medical devices - Quality management systems - Requirements for regulatory purposes (ISO 13485:2016)
DIN EN ISO 13485:2016

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality management system, which meets the requirements of the listed standard(s). See also notes overleaf.

Report No.: ITA1070742
Valid from: 2018-12-19
Valid until: 2021-12-18

S. Preiß
Stefan Preiß

Date, 2018-12-19



CERTIFICATO

N° Q5 071067 0006 Rev. 00

Titolare del certificato: Liofilchem S.r.l.
Via Scozia
64026 Roseto degli Abruzzi (TE)
ITALIA

Stabilimento(i): Liofilchem S.r.l.
Via Scozia, 64026 Roseto degli Abruzzi (TE), ITALIA
Liofilchem S.r.l.
Contrada Piane Vomano, Traversa di Via Grecia, 64026 Roseto degli Abruzzi (TE), ITALIA



Marchio di certificazione:

Campo di applicazione: Progettazione e sviluppo, produzione e commercializzazione di dispositivi medico diagnostici in-vitro: terreni di coltura per batteriologia, sistemi di identificazione e antibiogramma, kit per la determinazione di plasmaproteine. Distribuzione di altri dispositivi medico diagnostici in-vitro

Norma(e) applicata(e): EN ISO 13485:2016
Dispositivi medici - Sistemi di gestione per la qualità - Requisiti per scopi regolamentari (ISO 13485:2016)
DIN EN ISO 13485:2016

L'Organismo di Certificazione TÜV SÜD Product Service GmbH certifica che la società soprannominata ha istituito e mantiene un sistema di gestione qualità conforme ai requisiti della(e) norma(e) elencata(e). Vedere anche note sul resto.

N° del rapporto: ITA1070742
Valido da: 2018-12-19
Valido fino al: 2021-12-18

S. Preiß
Stefan Preiß

Data, 2018-12-19

DICHIARAZIONE DI CONFORMITÀ CE / EC DECLARATION OF CONFORMITY

DICHIARAZIONE DI CONFORMITÀ CE

La società Liofilchem® S.r.l., con Sede Legale in Via Scozia, 64026 Roseto degli Abruzzi (TE) Italia, in qualità di fabbricante del dispositivo medico-diagnostico *in vitro* elencato nella tabella allegata Revisione 32.1 del 07.06.2017

dichiara sotto la propria responsabilità

- che il dispositivo sopra indicato soddisfa tutte le disposizioni applicabili della Direttiva 98/79/CE (Allegato III) recepita nella Legislazione Italiana dal Decreto Legislativo n° 332 del 8 settembre 2000;
- che il dispositivo in oggetto non è incluso nell'Allegato II, lista A e B della Direttiva 98/79/CE
- che la documentazione tecnica di cui all'allegato III della direttiva 98/79/CE è a disposizione delle autorità nazionali presso la sua sede e sarà conservata per 5 anni dall'ultima data di fabbricazione del prodotto;
- che il processo di fabbricazione segue adeguati principi di assicurazione della qualità;
- di aver attivato e di mantenere aggiornato, un sistema di sorveglianza post-produzione per il monitoraggio dei prodotti;
- che il dispositivo in oggetto è stato messo in commercio munito di marcatura CE.

EC DECLARATION OF CONFORMITY

The company Liofilchem® S.r.l., registered office in Via Scozia, 64026 Roseto degli Abruzzi (TE) Italy, as a manufacturer of the *in vitro* medical-diagnostic device listed in the attached table, Revision 32.1 of 07.06.2017

hereby certifies under its own responsibility

- that the above mentioned device complies with all the applicable provisions of Directive 98/79/EC (Annex II) and its relevant transposition into national law;
- the above mentioned is not included in Annex II, List A and B of Directive 98/79/EC;
- that the technical documentation referred to at Annex III of the Directive 98/79/EC is available for the national authorities in its facility and that this documentation shall be kept for 5 years after the last product has been manufactured;
- that the manufacturing process follows suitable principles of quality assurance;
- that, has implemented and keep up to date, a post-production surveillance system for monitoring the products;
- that the device in question, was introduced into the market provided with CE mark.

Roseto, 07.06.2017

Direttore Tecnico/ Technical Director
 Dott. Silvio Brocco



PRODOTTI CE DI LIBERA VENDITA / FREE SALE CE PRODUCTS

Rev. 32.1 del 07.06.2017

10002	DNA AGAR + BULDI TOLUIDINA	10046	SERUM TELLURITE AGAR
10004	CLED ANDRADE AGAR	10047	BISMUTH SULFITE AGAR
10004*	CLED ANDRADE AGAR	10047*	BISMUTH SULFITE AGAR
10005	MAC CONKEY SORBITOL AGAR	10048	E.M.B. LEVINE AGAR
10005*	MAC CONKEY SORBITOL AGAR	10048*	E.M.B. LEVINE AGAR
10006	TRYPTIC SOY AGAR + 0.6% YEAST EXTRACT	10050	CAMPYLOBACTER AGAR (Sheep Blood 5%)
10007	BACILLUS CEREUS AGAR (PEMBA)	10050*	CAMPYLOBACTER AGAR (Sheep Blood 5%)
10007*	BACILLUS CEREUS AGAR (PEMBA)	10051	Legionella BOYE Agar
10013	DNase TEST AGAR	10051*	Legionella BOYE Agar
10013*	DNase TEST AGAR	10052	YERSINIA SELECTIVE AGAR
10014	Purple Lactose Agar	10052*	YERSINIA SELECTIVE AGAR
10014*	Purple Lactose Agar	10053	WILKINS CHALGREEN AGAR
10017	CZAPFEC DCOX AGAR	10053*	WILKINS CHALGREEN AGAR
10018	DRIGALSKY LACTOSE AGAR	10054	WURTZ LACTOSE AGAR
10020	Baird Parker Agar	10054*	WURTZ LACTOSE AGAR
10020*	Baird Parker Agar	10055	X.L.D. AGAR
10021	BIGGY (MICKERSON) AGAR	10055*	X.L.D. AGAR
10021*	BIGGY (MICKERSON) AGAR	10057	BILE AESCULIN AGAR
10022	BRIGHT GREEN AGAR	10057*	BILE AESCULIN AGAR
10022*	BRIGHT GREEN AGAR	10058S	TRYPTIC SOY AGAR Irradiated -30 mL-
10023	Chocolate Agar	10060	BRAIN HEART INFUSION AGAR
10023*	Chocolate Agar	10060*	BRAIN HEART INFUSION AGAR
10024	TRYPTOSE AGAR	10064	CHRISTENSEN UREA AGAR
10024*	TRYPTOSE AGAR	10065	SCHAEDLER KKV AGAR (Sheep Blood 5%)
10025	COLUMBIA AGAR (Horse Blood 5%)	10065*	SCHAEDLER KKV AGAR (Sheep Blood 5%)
10025*	COLUMBIA AGAR (Horse Blood 5%)	10067	SCHAEDLER KVN AGAR (Sheep Blood 5%)
10026	CLED AGAR	10069	XLT 4 Agar
10026*	CLED AGAR	10069*	XLT 4 Agar
10027	BACILLUS CEREUS AGAR (Messel)	10075	TRYPTIC SOY AGAR-NEUTRALIZING Irradiated
10027*	BACILLUS CEREUS AGAR (Messel)	10075*	TRYPTIC SOY AGAR-NEUTRALIZING Irradiated
10028	ISOSENSITEST AGAR	10078	MUELLER HINTON II MOD. AGAR
10028*	ISOSENSITEST AGAR	10078*	MUELLER HINTON II MOD. AGAR
10028*	ISOSENSITEST AGAR	10079	CASITONE AGAR
10029	MAC CONKEY AGAR	10079*	CASITONE AGAR
10029*	MAC CONKEY AGAR	10080	HAEMOPHYLLUS TEST AGAR
10030	MANNITOL SALT AGAR	10080*	HAEMOPHYLLUS TEST AGAR
10030*	MANNITOL SALT AGAR	10082	HEMOCACTER PYLORI AGAR
10031	MUELLER HINTON II AGAR	10082*	HEMOCACTER PYLORI AGAR
10031*	MUELLER HINTON II AGAR	10090	M.R.S. Agar
10033	PSEUDOMONAS (CETRIMIDE) AGAR	10090*	M.R.S. Agar
10033*	PSEUDOMONAS (CETRIMIDE) AGAR	10095	BRAIN HEART AGAR FOR HAEMOPHILLUS
10035	SABOURAUD AGAR	10129	MAC CONKEY AGAR MMG
10035*	SABOURAUD AGAR	10129*	MAC CONKEY AGAR MMG
10035S	SABOURAUD AGAR Irradiated	10131	Mueller Hinton II Agar (Sheep Blood 5%)
10036	S.S. AGAR	10131*	Mueller Hinton II Agar (Sheep Blood 5%)
10036*	S.S. AGAR	10132	Mueller Hinton Fastidious Agar (Horse Blood 5% + 20 mg/L PENICILIN)
10037	Tryptic Soy Agar	10132*	Mueller Hinton Fastidious Agar (Horse Blood 5% + 20 mg/L PENICILIN)
10037*	Tryptic Soy Agar	10134	Legionella BIPA Agar
10037S	TRYPTIC SOY AGAR Irradiated	10141	SALMONELLA TEST AGAR
10039	ROGOSA AGAR	10141*	SALMONELLA TEST AGAR
10040	NEW YORK CITY AGAR	10142	BLOOD AGAR (Sheep Blood 7% ISO 10560)
10040*	NEW YORK CITY AGAR	10142*	BLOOD AGAR (Sheep Blood 7% ISO 10560)
10041	LISTERIA PALCAM AGAR	10143	Mueller Hinton Agar + 5 % Horse Blood Lyzed
10041*	LISTERIA PALCAM AGAR	10145	CAMPYLOBACTER KARMALI AGAR
10042	CRYSTAL VIOLET AGAR (Sheep Blood 5%)	10146	CAMPYLOBACTER PRESTON AGAR
10042*	CRYSTAL VIOLET AGAR (Sheep Blood 5%)	10146*	CAMPYLOBACTER PRESTON AGAR
10043	HEKTOEN ENTERIC AGAR	10224	Baird Parker Agar
10043*	HEKTOEN ENTERIC AGAR	10225	LISTERIA PALCAM AGAR 140 mm
10044	NUTRIENT AGAR	10231	MUELLER HINTON II AGAR 140 mm
10044*	NUTRIENT AGAR	10233	R.P.M.I. AGAR

PRODOTTI CE DI LIBERA VENDITA / FREE SALE CE PRODUCTS
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10235	Sabouraud CAF Agar + Gentamicin	11041	AZIDE AGAR (Sheep Blood 5%)
10235*	Sabouraud CAF Agar + Gentamicin	11041*	AZIDE AGAR (Sheep Blood 5%)
10235S	Sabouraud CAF Agar + Gentamicin Irradiated	11052	DERMATOPHYTE (D.T.M.) AGAR
10236	CLED AGAR 140 mm	11052*	DERMATOPHYTE (D.T.M.) AGAR
10240	SCHAEDLER K AGAR (Sheep Blood 5%) 140mm	11054	GARDNERELLA AGAR (Sheep Blood 5%)
10241	SCHAEDLER KKY AGAR (Sheep Blood 5%) 140mm	11054*	GARDNERELLA AGAR (Sheep Blood 5%)
10242	SABOURAUD CAF AGAR 140 mm	11057	ENTEROCOCCO AGAR
10243	Sabouraud CAF Agar + Gentamicin 140mm	11057*	ENTEROCOCCO AGAR
10244	DERMATOPHYTE (D.T.M.) AGAR 140 mm	11058	SLANETZ BARTLEY AGAR (m-ENTEROCOCCUS)
10245	BRUCELLA BLOOD AGAR w/HEMIN AND VITAMIN K1	11058*	SLANETZ BARTLEY AGAR (m-ENTEROCOCCUS)
10246	Chromatic™ MH	11060	CLOSTRIDIUM AGAR (Sheep Blood 5%)
10247	Brucella Blood Agar with Hemin and Vitamin K1	11067	CLOSTRIDIUM AGAR (Sheep Blood 5%)
10248	Purple Lactose Agar 140 mm	11065	SCHAEDLER K AGAR (Sheep Blood 5%)
10334	NEOMYCIN BLOOD AGAR (Sheep Blood 5%)	11065*	SCHAEDLER K AGAR (Sheep Blood 5%)
10334*	NEOMYCIN BLOOD AGAR (Sheep Blood 5%)	11070	MYCOSEL AGAR
10335	MUELLER HINTON CHOCOLATE AGAR	11070*	MYCOSEL AGAR
10337	BORDET GENGOU AGAR (Sheep Blood 15%)	11124	COLUMBIA CNA MOD. AGAR (Sheep blood 5%)
10405	SCHAEDLER CNA AGAR (Sheep Blood 5%)	11124*	COLUMBIA CNA MOD. AGAR (Sheep blood 5%)
10407	VANCOMYCIN SCREEN AGAR	11132	Mueller Hinton Fastidious Agar (Horse Blood 5% + 20% DEFIBRIN) (140 mm)
10408	WILKINS CHALGREEN AGAR +5% SHEEP BLOOD	11135	SABOURAUD AGAR MODIFIED
10409	CAMPYLOBACTER CODA AGAR	11135*	SABOURAUD AGAR MODIFIED
10410	MUELLER HINTON AGAR w/ VITALEX	11143	HERELLEA AGAR
10411	BILE ESCULIN AZIDE AGAR w/VANCOMYCIN	11143*	HERELLEA AGAR
10412	Legionella BCYE Agar w/o Cysteine	11185	VOGEL-JOHNSON AGAR
10413	XLD Agar EP USP JP Formulation	11185*	VOGEL-JOHNSON AGAR
10416	MIDDLEBROOK 7H11 AGAR	11195	T.C.B.S. AGAR
10424	Legionella BCYE Agar w/Vancomycin + Cysteine	11195*	T.C.B.S. AGAR
10425	SCHODDORPHUM SELECTIVE AGAR	11196	SFS AGAR
10438	MacConkey Agar No.2	11196*	SFS AGAR
10439*	MacConkey Agar No.2	11200	PAR TEST AGAR
10441	Group A Selective Sheep Agar w/5% Sheep Blood	11200*	PAR TEST AGAR
10445	Chocolate Agar w/ Bacitracin, Vancomycin, Clindamycin	11205	MYOPLASMA AGAR
10459	CHROMATIC™ MRSA	11206	Mueller Hinton II Agar + 2% NaCl
10600	OXACILIN RESISTANCE STAPHYLOCOCCUS AGAR	11231	Mueller Hinton II Agar (Sheep Blood 5%) 140 mm
10601	CAMPYLOBACTER SKIRROW AGAR	11235	SABOURAUD CAF AGAR + TTC
10602	HELIcobACTER PYLORI EGG YOLK EMULSION	11235*	SABOURAUD CAF AGAR + TTC
10605	OxALISTERIA	11236	Sabouraud CAF Agar + Actidione
10620	CHOCOLATE BACITRACIN AGAR	11250	TNSDALE AGAR
11023*	CHOCOLATE BACITRACIN AGAR	11250*	TNSDALE AGAR
11024	COLUMBIA CNA AGAR (Sheep Blood 5%)	11335	SABOURAUD AGAR + GENTAMICIN
11024*	COLUMBIA CNA AGAR (Sheep Blood 5%)	11335*	SABOURAUD AGAR + GENTAMICIN
11025	COLUMBIA AGAR (Sheep Blood 5%)	11501	ENTEROCOCCUS AGAR + VANCOMYCIN
11025*	COLUMBIA AGAR (Sheep Blood 5%)	11506	BURKHOLDERIA CEPACIA SELECTIVE AGAR
11027	DESXYCHOLATE AGAR	11509	R.P.M.I. AGAR
11027*	DESXYCHOLATE AGAR	11510	M-HINTON-GLUCOSE-METHYLEN BLUE
11030	ANAEROBIC AGAR	11512	NUTRIENT AGAR acc.to ISO 21528
11033	PSEUDOMONAS ISOLATION AGAR	11513	COLUMBIA AGAR (Sheep Blood 5%)+VANCOMYCIN
11033*	PSEUDOMONAS ISOLATION AGAR	11518	Mueller Hinton Agar + Cloxacillin
11035	SABOURAUD CAF AGAR	11610	Chromatic™ E.coli O157
11035*	SABOURAUD CAF AGAR	11611	CHROMATIC™ DETECTION
11037	TRYPTIC SOY AGAR (Sheep Blood 5%)	11612	CHROMATIC™ CANDIDA
11037*	TRYPTIC SOY AGAR (Sheep Blood 5%)	11614	CHROMATIC™ SALMONELLA
11038	TRYPTIC SOY AGAR (Horse Blood 5%)	11616	CHROMATIC™ STAPH AUREUS
11038*	TRYPTIC SOY AGAR (Horse Blood 5%)	11617	CHROMATIC™ STREPTO B
11040	THAYER MARTIN AGAR	11618	CHROMATIC™ MH
11040*	THAYER MARTIN AGAR	11619	CHROMATIC™ CRE
		11621	CHROMATIC™ VRE
		11622	CHROMATIC™ ESBL
		11627	Chromatic™ Enterococcus

PRODOTTI CE DI LIBERA VENDITA / FREE SALE CE PRODUCTS
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11629	CHROMATIC™ ESBL + AmpC	18379	GARDNERELLA V. / THAYER MARTIN
11629*	CHROMATIC™ ESBL + AmpC	18379*	GARDNERELLA V. / THAYER MARTIN
11631	Chromatic™ OXA-48	18380	MAC CONKEY / TSA BLOOD
11632	Chromatic™ Clastidium difficile	18380*	MAC CONKEY / TSA BLOOD
11633	Chromatic™ Vibrio	18389	BAIRD PARKER / SABOURAUD CAF
11634	Chromatic™ Detection opaque	18390*	BAIRD PARKER / SABOURAUD CAF
11635	Chromatic™ Pseudomonas	18391	HEKTOEN ENTERIC / YERSINIA
12031	MUELLER HINTON II AGAR (120x120 mm)	18391*	HEKTOEN ENTERIC / YERSINIA
12032	Mueller Hinton II Agar (Sheep Blood 5%) (120 mm x 120 mm) (6-NAD) (120 mm x 120 mm)	18422	COLUMBIA CNA / GARDNERELLA
12033	Mueller Hinton Fastidious Agar (Horse Blood 5% + 20% DEFIBRIN) (120 mm x 120 mm)	18500	BAIRD PARKER / MAC CONKEY
13012	CLED/MACCONKEY/TSA BLOOD AGAR	18500*	BAIRD PARKER / MAC CONKEY
13012*	CLED/MACCONKEY/TSA BLOOD AGAR	18502	CLED / MAC CONKEY
13013	BAIRD PARKER/BIGGY/MACCONKEY	18502*	CLED / MAC CONKEY
13013*	BAIRD PARKER/BIGGY/MACCONKEY	18503	HEKTOEN ENTERIC / SS
13014	COLUMBIA CNA/COCCOLATO/THAYER MARTIN	18503*	HEKTOEN ENTERIC / SS
13014*	COLUMBIA CNA/COCCOLATO/THAYER MARTIN	18505	MAC CONKEY / S.S. AGAR
13017	CLED/MACCONKEY/MG/MALTO	18505*	MAC CONKEY / S.S. AGAR
13017*	CLED/MACCONKEY/MG/MALTO	18507	COLUMBIA CNA / CHOCOLATE
13018	BROM CRESOL PURPLE/COLUMBIA CNA/MAC CONKEY	18585	D.T.M. / SABOURAUD
13018*	BROM CRESOL PURPLE/COLUMBIA CNA/MAC CONKEY	18585*	D.T.M. / SABOURAUD
13019	CLED/MACCONKEY/DEFIBRINE	18700	Group A Selective/TSA II + Sheep Blood 5%
13019*	CLED/MACCONKEY/DEFIBRINE	18703	CHOCOLATE AGAR/THAYER MARTIN
13020	MAC CONKEY/B PARKER/TSA BLOOD	20075	MAC CONKEY BROTH (5 (6MC2) 20x5ml)
13345	GARDNERELLA V./ROGOSA/THAYER MARTIN	20077	PHYSIOLOGICAL SOLUTION 2.5 ml
13345*	GARDNERELLA V./ROGOSA/THAYER MARTIN	20079	PHYSIOLOGICAL SOLUTION 4.5 ml
13355	Gard V. / Chocolate / Thayer Martin	20081	INOCULUM SOLUTION 5 ML
13371	BAIRD PARKER/MACCONKEY/SABOURAUD CAF	20089	HELIcobACTER PYLORI TEST
13371*	BAIRD PARKER/MACCONKEY/SABOURAUD CAF	20095	PHYSIOLOGICAL SOLUTION
13480	MACCONKEY/VOGEL JOHNSON/SABOURAUD CAF	20105	Glucose Broth
13480*	MACCONKEY/VOGEL JOHNSON/SABOURAUD CAF	20121	INOCULUM BROTH 7 ML
13602	SABOURAUD CAF/BAIRD PARKER/BILE ESCULLINE	20128	TRYPTIC SOY BROTH 15 ml
13602*	SABOURAUD CAF/BAIRD PARKER/BILE ESCULLINE	20140	PURPLE LACTOSE BROTH
13607	CHOC. BAC./COLUMBIA/MAC CONKEY	20156	SUSPENSION MEDIUM 7 ML
13614	CLED/MACCONKEY/ENTEROCOCCO	20156	MYOPLASMA TRANSPORT BROTH
165312	CLED/MACCONKEY/ENTEROCOCCO	20159	TRICHOMONAS BROTH w/o CLORAMPHENICOL
18007	CHROMATIC™ STAPH AUREUS/ MRSA	20171	Thioglycolate Medium w/ VIT K & Hemin
18008	TSA BLOOD/CRONAGAR ORIENTATION	21241	Fluid Thioglycolate Medium
18008*	TSA BLOOD/CRONAGAR ORIENTATION	21330	SCHAEDLER BROTH
18009	Chromatic™ Salmonella/Hikoben Enteric	23001	F.B. FASTIDIUS BROTH
18012	BRILLIANT GREEN / SS AGAR	23003	MUELLER HINTON BROTH
18012*	BRILLIANT GREEN / SS AGAR	24070	MYCOSEL BROTH 20PV
18015	BIGGY (NICKERSON) / MALT AGAR	24071	Cooked Meat Medium
18015*	BIGGY (NICKERSON) / MALT AGAR	24091	HAEMOPHILUS TEST BROTH 20 PV
18017	COLUMBIA CNA BLOOD/CHROMAGAR	24098	PEPTONE WATER 20PV
18017*	COLUMBIA CNA BLOOD/CHROMAGAR	24100	Alkaline Peptone Water
18018	MAC CONKEY SABOURAUD CAF	24103	NUTRIENT BROTH 20PV
18020	EMB LEVINE / TSA BLOOD	24104	BRAIN HEART INFUSION BROTH 20PV
18020*	EMB LEVINE / TSA BLOOD	24105	Glucose Broth
18021	Chromatic™ CRE / Chromatic™ ESBL	24107	MUELLER HINTON II BROTH 20 PV
18021*	Chromatic™ CRE / Chromatic™ ESBL	24108	MULLER KAUFFMANN BROTH 20PV
18022	TSA Blood/Columbia CNA	24109	Sabouraud Dextrose Broth
18024	MSA / Chromatic™ MRSA	24110	Selenite Broth
18025	Schaedler K / Schaedler KKV	24111	TODD HEWITT BROTH 20PV
18327	COLUMBIA CNA / MAC CONKEY	24112	TRYPTOSE BROTH 20PV
18327*	COLUMBIA CNA / MAC CONKEY	24115	TRICHOMONAS BROTH 20PV

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610049	LEGIONELLA GUYE AGAR BASE (ISO 11731)	6101475	SLANETZ AND BARTLEY AGAR + TTC
610050	Fluid Thioglycollate Medium	610148	SPS AGAR
610050/5	Fluid Thioglycollate Medium	610151	BILE AESCULIN BROTH
610051	TODD HEWITT BROTH	610152	AMES TRANSPORT MEDIUM + CHARC.
610051/5	TODD HEWITT BROTH	610152/5	AMES TRANSPORT MEDIUM + CHARC.
610052	Tryptic Soy Agar	610153	AZIDE BLOOD AGAR BASE
610052/5	Tryptic Soy Agar	610155	AZIDE VIOLET BLOOD AGAR BASE
610053	TRYPTIC SOY BROTH	610157	BIOTONE AGAR
610055	TRYPTIC SOY BROTH	610158	BIOTONE BROTH
610055/5	T.S.I. AGAR USP	610159	CPM SELECTIVE WITH CAF
610056	CLOSTRIDIUM BROTH	610160	DERMATOPHYTE (D.T.M.) AGAR
610056/5	CLOSTRIDIUM BROTH	610161	DEXTROSE BROTH
610057	MAC CONKEY AGAR No.2	610163	G.N. HAJNA BROTH
610057/5	MAC CONKEY AGAR No.2 5 KG	610164	HERELLEA AGAR
610060	X.L.D. AGAR (ISO 6579)	610164/5	HERELLEA AGAR
610060/5	X.L.D. AGAR	610165	KOSER CITRATE MEDIUM
610065	GSS AGAR BASE (ISLAM)	610168	LISTERIA PALCAM AGAR
610071	PSEUDOMONAS AGAR BASE	610169	I.U.T.M. MEDIUM
610072	CZAPEK DOX BROTH	610170	MAC CONKEY MMG AGAR
610079	BRUCELLA AGAR BASE	610170/5	MAC CONKEY MMG AGAR
610080	WORT BROTH W/O NaCl	610172	MALONATE BROTH
610082	XLT 4 AGAR	610174	PHENOL RED BROTH BASE
610085	CZAPEK DOX AGAR	610175	RAPPAPORT VASSILIADIS BROTH (ISO 6785-6579)
610096	REINFORCED CLOSTRIDIAL AGAR	610176	ROGOSA AGAR
610097	STAPHYLOCOCCUS BROTH	610177	ROGOSA BROTH
610098	Alkaline Peptone Water	610179	SABOURAUD CAF AGAR + ACTIDIONE
610101	MALT AGAR	610180	S.F. BROTH
610103	SABOURAUD AGAR	610181	S.L.M. MEDIUM
610103/5	SABOURAUD AGAR	610182	STUART TRANSPORT MEDIUM
610104	Sabouraud Dextrose Broth	610183	TETRAATHIONATE BROTH BASE
610107	UREA AGAR BASE (ISO 6785)	610185	TRYPTIC (CTA) MEDIUM
610108	MAC CONKEY SORBITOL AGAR	610186	VOGEL JOHNSON AGAR
610109	P.P.L.O. BROTH	610188	BLOOD AGAR BASE N. 2
610110	MUELLER HINTON AGAR MODIFIED	610191	AMES TRANSPORT MEDIUM (w/o CHARCOAL)
610111	YERSINIA SELECTIVE AGAR BASE	610191/5	AMES TRANSPORT MEDIUM (w/o CHARCOAL)
610112	CLED ANDRADE AGAR	610193	TRYPTOSE AGAR
610113	COLUMBIA DNA AGAR BASE	610195	MAC CONKEY AGAR w/o CRYSTALL VIOLET
610114	BACILLUS CEREBUS AGAR BASE (MOSSSEL) ISO 7932	610197	TRYPTOFAN BROTH
610115	CLOSTRIDIUM DIFFICILE AGAR BASE	610200	CAMPYLOBACTER KARMAJI AGAR BASE
610117	TRYPTONE YEAST AGAR	610203	SABOURAUD CAF AGAR
610118	ANDRADE LACTOSE PEPTONE WATER	610205	SABOURAUD CAF AGAR 5 KG
610123	CORN MEAL AGAR	610206	TRYPTONE WATER (ISO/DIS 3811)
610125	LEGIONELLA GUYE AGAR BASE	610207	CLOSTRIDIUM PERFRIGENS AGAR BASE
610128	MAC CONKEY AGAR w/o BILE SALT	610210	BILE AESCULIN AGAR
610130	CAMPYLOBACTER BLOOD FREE MEDIUM BASE	610211	KLIGLER IRON AGAR MOD.
610131	CAMPYLOBACTER ENRICHMENT BROTH BASE	610214	MIDDLEBROOK 7H9 BROTH BASE
610132	MOTILITY TEST AGAR	610217	NUTRIENT BROTH N2
610134	SLANETZ BARTLEY AGAR BASE ISO 7899-2	610218	Mueller Hinton II Broth
610135	BIGGY (NICKERSON) AGAR	610221	ANTIBIOTIC TEST MEDIUM
610136	BACILLUS CEREBUS AGAR BASE (PEMBA)	610222	CLOSTRIDIUM BROTH w/o AGAR
610137	SCHAEDLER BROTH	610225	CLOSTRIDIUM BROTH w/o AGAR
610140	E.M.B. AGAR w/ LACTOSE + SUCROSE	610223	MAC CONKEY AGAR w/o Salt
610143	LIVER BROTH	610227	PHENOL RED AGAR BASE
610144	MRS BROTH w/o GLUCOSE	610229	ANTIBIOTIC MEDIUM E
610145	Selenite Broth	610230	OXIDATIVE/FERMENTATIVE MEDIUM
610146	SABOURAUD MALTOSE AGAR	610233	TRYPTOSE BROTH
610147	SLANETZ AND BARTLEY AGAR + TTC	610235	MANNITOL MOTILITY TEST MEDIUM
		610236	MOTILITY INDOLE UREA AGAR (M.I.U.)

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610245	LB AGAR	611010	T.C.B.S. AGAR
610301	BISMUTH SULPHITE AGAR	611015	SIERRA LIPOLYTIC AGAR
610303	Lysine Decarboxylase Broth	611021	HEART INFUSION BROTH
610304	CF BASAL MEDIUM	611021/5	HEART INFUSION BROTH
610305	ORNITHINE DECARBOXYLASE BROTH	611022	MIDDLEBROOK 7H10 AGAR BASE
610306	ARGININE DECARBOXYLASE BROTH	611203	SABOURAUD CAF (19/1) AGAR
610308	PHENOL RED AGAR BASE	611255	ISOSENSITEST AGAR
610309	PSEUDOMONAS AGAR F	611366	STAPHYLOCOCCUS 110 AGAR
610310	PSEUDOMONAS AGAR P	611367	BILE BACTERIOLOGICAL
610311	UREA BROTH	611401	IRON SULPHITE AGAR
610315	ANTIBIOTIC AGAR N.11	611402	CARY BLAIR TRANSPORT MEDIUM
610319	PRZER SELECTIVE ENTEROCOCCUS AGAR	611502	CASEIN PEPTONE
610322	NITRATE BROTH	611601	GLUCOSE
610331	DIAGNOSTIC SENSITIVITY TEST AGAR (D.S.T.)	611601/5	GLUCOSE
610341	T.S.I. AGAR acc EP	611602	Maltose
610343	EMVON BROTH	611618	CHROMATIC™ MH
610343/5	MANNITOL SALT BROTH	611619	CHROMATIC™ CRE AGAR BASE
610363	Yeast Extract Sodium Lactate medium	611701	PEPTONE BACTERIOLOGICAL
610364	Tryptose Phosphate Broth	611701/5	PEPTONE BACTERIOLOGICAL
610364/5	Tryptose Phosphate Broth	611706	Hemoglobin
610372	Coated Meat Medium	611801	SUCROSE
610482	POLYPEPTONE	611801/5	SUCROSE
610495	BRAIN HEART INFUSION	611901	BILE SALT N.3
610495/5	BRAIN HEART INFUSION	611901/5	BILE SALT N.3
610496	ACID HYDROLYSATE OF CASEIN	612001	LIVER EXTRACT
610497	BEEF EXTRACT	612001/5	LIVER EXTRACT
610497/5	BEEF EXTRACT	612101	PEPTONE MYCOLOGICAL
610498	LACTOSE	612101/5	PEPTONE MYCOLOGICAL
610498/5	LACTOSE	612201	PROTEOSE PEPTONE
610506	CYSTINE HEART AGAR	612201/5	PROTEOSE PEPTONE
610511	CHROMATIC™ SALMONELLA	612202	STREPTOCOCCUS SELECTIVE AGAR
610612	CHROMATIC™ DETECTION	612203	STREPTOCOCCUS BROTH
610612/5	CHROMATIC™ DETECTION	612501	SOY PEPTONE
610613	CHROMATIC™ CANDIDA	612501/5	SOY PEPTONE
610614	Chromatic™ E coli O157	620001	BILE AESCULIN AZIDE AGAR
610615	CHROMATIC™ MRSA	620002	DEXTROSE AGAR
610616	CHROMATIC™ STAPH AUREUS	620005	BLOOD AGAR BASE
610617	CHROMATIC™ STREP B	620006	BORDET GENGOU AGAR BASE
610625	SABOURAUD CAF (50 mg/L) AGAR	620007	BRAIN HEART INFUSION AGAR
610627	MUELLER HINTON II AGAR	620008	BRAIN HEART INFUSION BROTH
610627/5	MUELLER HINTON II AGAR	620009	BRIGHT GREEN AGAR
610629	MUELLER HINTON II AGAR	620012	CLED AGAR
610629/5	CHROMATIC™ ESBL	620013	COLUMBIA AGAR BASE
610633	Chromatic™ Vibrio	620014	DESOXYCHOLATE AGAR
611000	SODIUM CHLORIDE	620015	DESOXYCHOLATE CITRATE AGAR
611001	AGAR	620016	DRIGALSKY LACTOSE AGAR
611001/5	AGAR	620019	E.M.B. LEVINE AGAR
611002	GELATIN BACTERIOLOGICAL	620021	HEKTOEN ENTERIC AGAR
611002/5	GELATIN BACTERIOLOGICAL	620022	G.C. MEDIUM
611003	SODIUM SELENITE	620023	KLIGLER IRON AGAR
611004	TRYPTONE	620024	M.R.S. AGAR (ISO/FDIS 15214)
611004/5	TRYPTONE	620025	M.R.S. BROTH (ISO/FDIS 15214)
611005	YEAST EXTRACT	620026	LOWENSTEIN JENSEN MEDIUM
611005/5	YEAST EXTRACT	620027	LYSINE IRON AGAR
611006	MALT EXTRACT	620028	MAC CONKEY AGAR
611007	CAMPYLOBACTER AGAR BASE	620029	MANNITOL SALT AGAR
611008	TRYPTOSE	620032	MR-VF BROTH
611008/5	TRYPTOSE	620033	MUELLER HINTON AGAR
611009	GLUCOSIO	620034	MUELLER HINTON BROTH

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620035	MULLER KAUFFMANN BROTH	620146	SABOURAUD MALTOSE AGAR
620036	Nutrient Agar (ISO 16286)	620147	SLANETZ AND BARTLEY AGAR + TTC
620037	NUTRIENT BROTH	620148	SFS AGAR
620038	PEPTONE WATER	620151	BILE AESCULIN BROTH
620039	PHENYLALANINE AGAR	620152	AMIES TRANSPORT MEDIUM + CHARC.
620041	PSEUDOMONAS CETRIMIDE AGAR (ISO 8360-1)	620153	AZIDE BLOOD AGAR BASE
620042	SS AGAR (MODIFIED)	620155	AZIDE VIOLET BLOOD AGAR BASE
620043	SCHAEDLER AGAR BASE	620157	BIOTONE AGAR
620044	PURPLE LACTOSE AGAR	620158	BIOTONE BROTH
620046	SIMMONS CITRATE AGAR	620159	CPM SELECTIVE WITHCAF
620047	MONSIEUR AGAR	620160	DERMATOPHYTE (D.T.M.) AGAR
620048	AEROMONAS AGAR BASE	620163	G.N. HAINA BROTH
620050	Fluid Thioglycollate Medium	620164	HERELLEA AGAR
620051	TODD-HIEWITT BROTH	620165	KOSER CITRATE BROTH
620052	Tryptic Soy Agar	620168	LISTERIA PALCAM AGAR
620053	TRYPTIC SOY BROTH	620169	ILUT.M. MEDIUM
620055	T.S.I. AGAR USP	620170	MAC CONKEY NMG AGAR
620056	CLOSTRIDIUM BROTH	620172	MALONATE BROTH
620057	MAC CONKEY AGAR No.2	620174	PHENOL RED BROTH BASE
620060	X.L.D. AGAR (ISO 6759)	620175	RAPPAPORT VASSILIADIS BROTH
620061	TRICHOMONAS BROTH	620176	ROGOSA AGAR
620065	GSS AGAR BASE (ISLAM)	620177	ROGOSA BROTH
620071	PSEUDOMONAS AGAR BASE	620179	SABOURAUD CAF AGAR + ACTIDIONE
620072	CZAPEK DOX BROTH	620180	S.F. BROTH
620075	PHENYLALANINE MALONATE BROTH	620181	S.L.M. MEDIUM
620079	BRUCELLA AGAR BASE	620182	STUART TRANSPORT MEDIUM
620085	CZAPEK DOX AGAR	620183	TETRAATHIONATE BROTH BASE
620086	REINFORCED CLOSTRIDIAL AGAR	620185	TRYPTIC (CTA) MEDIUM
620097	STAPHYLOCOCCUS BROTH	620186	VOSEL JOHNSON AGAR
620098	Alkaline Peptone Water	620188	BLOOD AGAR BASE N. 2
620101	MALT AGAR	620191	AMIES TRANSPORT MEDIUM (w/o CHARCOAL)
620103	SABOURAUD AGAR	620193	TRYPTOSE AGAR
620104	Sabouraud Dextrose Broth	620196	TRYPTIC BILE AGAR
620107	UREA AGAR BASE (ISO 6785)	620197	TRYPTOFAN BROTH
620108	MAC CONKEY SORBITOL AGAR	620200	CAMPYLOBACTER KARMALI AGAR BASE
620109	P.P.L. BROTH	620203	SABOURAUD CAF AGAR
620110	MUELLER HINTON AGAR MODIFIED	620205	DNAse TEST AGAR
620112	YERSINIA SELECTIVE AGAR BASE	620206	TRYPTONE WATER ISODIS 3811)
620113	COLUMBIA OXA AGAR BASE	620207	CLOSTRIDIUM PERFRIGENS AGAR BASE
620114	BACILLUS CEREUS AGAR BASE (MOSSEL) ISO 7392	620210	BILE AESCULIN AGAR
620115	CLOSTRIDIUM DIFFICILE AGAR BASE	620211	KUGLER IRON AGAR MOD.
620117	TRYPTONE YEAST AGAR	620214	MIDDLEBROOK 7H9 BROTH BASE
620118	ANDRADE LACTOSE PEPTONE WATER	620217	NUTRIENT BROTH N.2
620122	MIDDLEBROOK 7H10 AGAR BASE	620218	Mueller Hinton II Broth
620123	CORN MEAL AGAR	620229	ANTIBIOTIC MEDIUM E
620125	LEGIONELLA CYE AGAR BASE	620233	TRYPTOSE BROTH
620130	CAMPYLOBACTER BLOOD FREE MEDIUM BASE	620235	MANNITOL MOTILITY TEST MEDIUM
620131	CAMPYLOBACTER ENRICHMENT BROTH BASE	620236	Lysine Decarboxylase Broth
620132	MOTILITY TEST AGAR	620309	PSEUDOMONAS AGAR F
620134	SLANETZ BARTLEY AGAR BASE ISO 7899-2	620311	UREA BROTH
620135	BIGGY (NICKERSON) AGAR	620495	BRAIN HEART INFUSION
620136	BACILLUS CEREUS AGAR BASE (PEIMBA)	620496	ACID HYDROLISATE OF CASEIN
620137	SCHAEDLER BROTH	620497	IBEEF EXTRACT
620140	E.M.B. AGAR w/ LACTOSE + SUCROSE	620498	LACTOSE
620143	LIVER BROTH	620611	CHROMATIC™ SALMONELLA
620144	MRS BROTH w/o GLUCOSE	620612	CHROMATIC™ DETECTION
620145	Selenite Broth	620613	CHROMATIC™ CANDIDA

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620614	Chromatic™ E.coli O157	79032	SensiQuattro Gram-positive 4 Test
620615	CHROMATIC™ MRSA	79033	SensiQuattro Candida EU 4 Test
620616	CHROMATIC™ STAPH AUREUS	79156	A.F. GENTAL SYSTEM 4 Test
620617	CHROMATIC™ STREP B	79160	URIN SYSTEM Plus 4 Test
620627	MUELLER HINTON II AGAR	79161	URIN SYSTEM Chrom 4 Test
620629	CHROMATIC™ ESBL	79560	STREPTO SYSTEM 12 R 8 Test
621000	SODIUM CHLORIDE	79562	MYCOPLASMA SYSTEM Plus 4 Test
621001	AGAR	79518	ENTEROSYSTEM 16R 4 Test
621003	SODIUM SELENITE	79519	Enterosystem 24R 4 Test
621004	TRYPTONE	79620	Anaerobe System 4 Test
621005	YEAST EXTRACT	79630	STAF SYSTEM 16 R 4 Test
621006	MALT EXTRACT	79670	COPRO SYSTEM 8 Test
621007	CAMPYLOBACTER AGAR BASE	79675	COPRO SYSTEM Plus 4 Test
621010	TCBS AGAR	79678	PATHOGENIC SYSTEM DOUBLE 8 Test
621015	SIERRA LIPOLYTIC AGAR	79679	PATHOGENIC SYSTEM 4 Test
621021	HEART INFUSION BROTH	79681	PATHOGENIC SYSTEM AST
621022	MIDDLEBROOK 7H10 AGAR BASE	79714	INTEGRAL SYSTEM ENTEROBATTERI 4 Test
621210	WURTZ LACTOSE AGAR	79718	INTEGRAL SYSTEM STAFILOCOCCI 4 Test
621265	ISOSENSITEST AGAR	79720	INTEGRAL SYSTEM STREPTOCOCCI 4 Test
621367	BILE BACTERIOLOGICAL	79724	INTEGRAL SYSTEM GARDNERELLA 4 Test
621401	IRON SULPHITE AGAR	79622	INTEGRAL SYSTEM YEASTS Plus 4 Test
621402	CARY BLAIR TRANSPORT MEDIUM	80009	IODINE MKT SOLUTION 10 x 10 ml
621601	GLUCOSE	80010	XLT 4 supplement 2 x 50 ml
621618	CHROMATIC™ MH	80021	GLYCEROL supplement 4 x 50 ml
621619	CHROMATIC™ CRE AGAR BASE	80022	POTASSIUM TELLURITE 1% suppl. 5 x 10 ml
621701	PEPTONE BACTERIOLOGICAL	80031	TWEEN 80 supplement 2 x 50 ml
622202	STREPTOCOCCUS SELECTIVE AGAR	80047	CHROMATIC™ SALMONELLA Supplement 2x50 ml
71618	LOWENSTEIN JENSEN MEDIUM w/ GLYCEROL 1 litre	80049	MULLER KAUFFMANN 3X50 ml (IsoBio.G.O.1%)
71619	ENTEROSYSTEM 18R 20 Test	80053	VITAMIN K 1% supplement 5 x 5 ml
71619	Enterosystem 24R 20 Test	80056	LEGIONELLA growth supplement 1.0 vials
71620	Anaerobe System 20 Test	80057	H2O2 REAGENT 5 x 10 ml
71630	STAF SYSTEM 16 R 20 Test	80060	DECONTAM-KIT
71670	COPRO SYSTEM 40 Test	80110	UREA 40% 6X100 ml
71675	COPRO SYSTEM Plus 20 Test	80219	EGG YOLK emulsion 4 x 80 ml
71678	PATHOGENIC SYSTEM DOUBLE 40 Test	80252	ENTEROSYSTEM 18R REAGENT 100/200 Test
71679	PATHOGENIC SYSTEM 20 Test	80253	COPRO SYSTEM REAGENTS (antisera)
71681	PATHOGENIC SYSTEM AST	80257	LISTERIA SYSTEM 18R-REAG 100/200 Test
71714	INTEGRAL SYSTEM ENTEROBATTERI 20 Test	80258	A.F. GENTAL SYSTEM REAGENT
71718	INTEGRAL SYSTEM STAFILOCOCCI 20 Test	80260	IDENTIF. SYSTEM REAGENT
71720	INTEGRAL SYSTEM STREPTOCOCCI 20 Test	80271	KOYAK'S REAGENT 4x35 ml
71724	INTEGRAL SYSTEM GARDNERELLA 20 Test	80272	FERRIC CHLORIDE 10% 2x 25 ml
71922	INTEGRAL SYSTEM YEASTS Plus 20 Test	80273	NINHYDRIN 7% 10 ml
72580	STREPTO SYSTEM 12 R 40 Test	80275	MIF COLOR KIT 50 Test
72592	MYCOPLASMA SYSTEM Plus 20 Test	80276	ZIEHL-NEEUSEN 3 x 250 ml
74156	A.F. GENTAL SYSTEM 20 Test	80277	METHYLENE BLUE Solution 250 ml
74160	URIN SYSTEM Plus 20 Test	80279	VASELINE OIL 4 x 50 ml
74161	URIN SYSTEM Chrom 20 Test	80280	V.P. TEST Reagent 10x10ml
75001	Sensitest, Colistin 0.25 - 16 mg/l	80281	V.P. TEST EP 10 x 10 ml
76010	Sensitest gram-negative 20 Test	80282	Kil Mayer-Gotwald Giemsa
76020	Sensitest gram-positive 20 Test	80289	SAFRANIN SOLUTION 1000 ml
76031	SensiQuattro Gram-negative 20 Test	80391	POTASSIUM TELLURITE 3.5% suppl. 3x10 ml
76032	SensiQuattro Gram-positive 20 Test	80292	UREA 40 % supplement 10 x 5 ml
76033	SensiQuattro Candida EU 20 Test	80293	GRAM COLOR KIT 4 x 250 ml
76034	ENTERO PLURI TEST 10 Test	80294	KIT COLOR ALBERT 2 x 250 ml
76035	ENTERO PLURI TEST 25 Test	80295	DECOLORIZING SOLUTION 1000 ml
76520	OXIFERM PLURI TEST 10 Test	80296	LUKOL PVP SOLUTION 1000 ML
76521	OXIFERM PLURI TEST 25 Test	80298	LUKOL PVP SOLUTION 250 ml
79010	Sensitest gram-negative 4 Test	80299	CRYSTAL VIOLET SOLUTION 1000 ml
79020	Sensitest gram-positive 4 Test	80300	TTC 1% supplement 5 x 10 ml
79031	Sensitest gram-negative 4 Test	80350	ANTIBIOTIC TEST

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80351	RAPID ANTIMIOTIC TEST	50 Test	
80380	KINYONIN COLOR KIT	2 x 250 ml	
80390	FIXUR 1		
80409	IODINE SOLUTION 10 x 10 ml		
80410	XLT 4 SUPPLEMENT 4 x 50 ml		
80422	POTASSIUM TELLURITE 1% Supplement 10 x 10 ml		
80430	TTC 1% supplement 10 x 10 ml		
80431	TWEEN 80 Supplement 4 x 50 ml		
80453	VITAMIN K 1% SUPPLEMENT 10 x 5 ml		
81001	AMPICILLIN supplement 10 vials		
81002	AMPICILLIN (BMPA) supplement 10 vials		
81003	BRUCELLA supplement 10 vials		
81004	CAMPYLOBACTER Preston supplement 10 vials		
81005	CN (Pseudomonas) supplement 10 vials		
81007	CLOSTRIDIUM difficile supplement 10 vials		
81008	LEGIONELLA (GVPC) supplement 10 vials		
81009	IODINE solution 5 x 10 ml		
81011	CLOSTRIDIUM perfringens (T.S.C.) sup 10 v.		
81012	LCAT supplement 10 vials		
81014	BORDETELLA supplement 10 vials		
81015	HAEMOPHILUS supplement 10 vials		
81016	CAMPYLOBACTER Butzer supplement 10 vials		
81017	BACILLUS Cereus Supplement 10 Vials		
81019	CHLORAMPHENICOL supplement 10 vials		
81020	LEGIONELLA (IMVY) supplement 10 vials		
81022	MMG supplement 10 vials		
81023	VITALEX growth supplement 10 vials		
81024	V.C.N.T. supplement 10 vials		
81025	DERMATOPHYTE supplement 10 vials		
81026	LISTERIA PALCAM supplement 10 vials		
81032	ONPG 1.5% Supplement 10 vials		
81033	GENTAMYCIN supplement 10 vials		
81035	MIDDLEBROOK 7H 10 supplement 4 x 50 ml		
81036	CAMPYLOBACTER KARMALI Supplement 10 vials		
81037	CAMPYLOBACTER CCDA supplement 10 vials		
81038	CAMPYLOBACTER C.T.V.N. Supplement 10 vials		
81039	YERSINIA supplement 10 vials		
81040	GARDNERELLA vaginalis Supplement 10vials		
81041	V.C.A.T. supplement 10 vials		
81042	LISTERIA FRANSER supplement (1125mg)10 vials		
81048	CNA (Star/Step) supplement 10 vials		
81050	CAMPYLOBACTER growth supplement 10 vials		
81051	CAMPYLOBACTER Blazer Warn sup 10 vials		
81054	SCHAEDLER supplement 10 vials		
81055	CAMPYLOBACTER Skirrow supple 10 vials		
81056	LEGIONELLA (BCYE) growth supple 10 vials		
81062	VANCOMYCIN Supplement for VRE 10 vials		
81077	CAMPYLOBACTER C.T.V.A. Supplement 10 vials		
81078	CHROMATIC™ MRSA Supplement		
81079	UREA-ARGININE SCREEN		
81082	CEFKIME TELLURITE Supplement		
81083	MEROPENEM Supplement		
81084	NEOMYCIN Solution		
81085	CHROMATIC™ STAPH AUREUS Supplement		
81086	VCC MOD SELECTIVE Supplement		
81088	CHROMATIC™ CRE Supplement		
81089	Chromatic™ ESBL Supplement		
81090	CHROMATIC™ ESBL+AmPC Supplement		
81091	Legionella BCYE Growth Supplement w/o L-cysteine		

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88214	MANNITOL TEST	30 Test	
88215	MANNOSE TEST	30 Test	
88216	RHAMNOSE TEST	30 Test	
88217	SALICIN TEST	30 Test	
88218	SORBITOL TEST	30 Test	
88219	TREHALOSE TEST	30 Test	
88220	XYLOSE TEST	30 Test	
89022	CultControl™ Aspergillus brasiliensis ATCC® 16404™		
89023	CultControl™ Bacillus subtilis ATCC® 6633™		
89024	CultControl™ Candida albicans ATCC® 10231™		
89025	CultControl™ Enterococcus faecalis ATCC® 19433™		
89026	CultControl™ Enterococcus faecalis ATCC® 29212™		
89028	CultControl™ Escherichia coli ATCC® 8739™		
89029	CultControl™ Escherichia coli ATCC® 25922™		
89030	CultControl™ Listeria innocua ATCC® 32090™		
89031	CultControl™ Listeria ivanovi ATCC® 19119™		
89032	CultControl™ Listeria monocytogenes ATCC® 25939™		
89033	CultControl™ Pseudomonas aeruginosa ATCC® 27853™		
89034	CultControl™ Pseudomonas aeruginosa ATCC® 9027™		
89035	CultControl™ Rhodococcus equi ATCC® 6939™		
89036	CultControl™ Saccharomyces cerevisiae ATCC® 9783™		
89037	CultControl™ Salmonella typhimurium ATCC® 14028™		
89038	CultControl™ Shigella flexneri ATCC® 12022™		
89039	CultControl™ Staphylococcus aureus NCTC 12489		
89040	CultControl™ Staphylococcus aureus ATCC® 25923™		
89041	CultControl™ Staphylococcus aureus ATCC® 29213™		
89042	CultControl™ Staphylococcus aureus ATCC® 33852™		
89043	CultControl™ Staphylococcus aureus ATCC® 43300™		
89044	CultControl™ Staphylococcus aureus ATCC® 6558™		
89045	CultControl™ Staphylococcus epidermidis ATCC® 12228™		
89046	CultControl™ Streptococcus agalactiae ATCC® 13813™		
89047	CultControl™ Streptococcus pneumoniae ATCC® 49619™		
89048	CultControl™ Streptococcus hyogenes ATCC® 19615™		
89049	CultControl™ Proteus mirabilis ATCC® 12453™		
89050	CultControl™ Yersinia enterocolitica ATCC® 9610™		
89051	CultControl™ Listeria monocytogenes ATCC® 19115™		
89052	CultControl™ Legionella pneumophila subsp. pneumophila ATCC® 35152™		
89053	CultControl™ Clostridium perfringens ATCC® 13124™		
89054	server Typhimurium ATCC® 13311™		
89055	CultControl™ Lactobacillus paracasei subsp. paracasei ATCC® BAA-52™		
89056	CultControl™ Vibrio parahaemolyticus ATCC® 17802™		
89057	CultControl™ Aspergillus fumigatus ATCC® 204305™		
89058	CultControl™ Shigella sonnei ATCC® 25961™		
89059	CultControl™ Clostridium sorcellii ATCC® 3714™		
89060	CultControl™ Listeria monocytogenes ATCC® 7644™		
89061	CultControl™ Streptococcus bovis ATCC® 33317™		
89062	CultControl™ Streptococcus mitis ATCC® 25175™		
89063	CultControl™ Streptococcus pneumoniae ATCC® 27336™		
89064	CultControl™ Streptococcus sanguinis ATCC® 10558™		
89065	CultControl™ Enterobacter cloacae subsp. cloacae ATCC® BAA-1143™		
89066	CultControl™ Enterococcus faecalis ATCC® 49532™		
89067	CultControl™ Enterococcus faecalis ATCC® 49533™		
89068	CultControl™ Escherichia coli NCTC 11554™		
89069	CultControl™ Klebsiella pneumoniae ATCC® BAA-2145™		

PRODOTTI CE DI LIBERA VENDITA / FREE SALE CE PRODUCTS

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Table with 3 columns: Product Code, Product Name, and Description. Contains various pharmaceutical products like CultiControl, CultiControl, and CultiControl.

PRODOTTI CE DI LIBERA VENDITA / FREE SALE CE PRODUCTS

Rev. 32.1 del 07.06.2017

Table with 3 columns: Product Code, Product Name, and Description. Contains various pharmaceutical products like Chloramphenicol, Chloramphenicol, and Chloramphenicol.

PRODOTTI CE DI LIBERA VENDITA / FREE SALE CE PRODUCTS

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9081/1	CEFOTETAN GTT 30 µg	50 Discs
9082	TYLOSIN TY 30 µg	250 Discs
9082/1	TYLOSIN TY 30 µg	50 Discs
9083	TRIMETHOPRIM TM 2,5 µg	250 Discs
9083/1	TRIMETHOPRIM TM 2,5 µg	50 Discs
9084	SULFAMETHOXAZOLE SMX 30 µg	250 Discs
9084/1	SULFAMETHOXAZOLE SMX 50µg	50 Discs
9085	Impipenam + Phenyboronic acid IM + BO	250 Discs
9085/1	Impipenam + Phenyboronic acid IM + BO	50 Discs
9086	Impipenam + Cloxacillin IM + CL	250 Discs
9086/1	Impipenam + Cloxacillin IM + CL	50 Discs
9087	EDTA ED	250 Discs
9087/1	EDTA ED	50 Discs
9088	SPIRAMYCIN SP 100 µg	250 Discs
9088/1	SPIRAMYCIN SP 100 µg	50 Discs
9089	GEFIRINE CFM 5 µg	250 Discs
9089/1	GEFIRINE CFM 5 µg	50 Discs
9090	Daplokyon DAP 30 µg	250 Discs
9090/1	Daplokyon DAP 30 µg	50 Discs
9091	PEFLOXACIN PEF 5 µg	250 Discs
9091/1	PEFLOXACIN PEF 5 µg	50 Discs
9092	DICLOXACILLIN DCX 1 µg	250 Discs
9092/1	DICLOXACILLIN DCX 1 µg	50 Discs
9093	TIAMULIN T 30 µg	250 Discs
9093/1	TIAMULIN T 30 µg	50 Discs
9094	IMPENEMICILASTIN IMC 20 µg	250 Discs
9095	IMPENEMICILASTIN IMC 20 µg	50 Discs
9095/1	IMPENEMICILASTIN IMC 20 µg	50 Discs
9096	TICARACILLIN-CLAVULINIC ACID TTC 65 µg	250 Discs
9096/1	TICARACILLIN-CLAVULINIC ACID TTC 65 µg	50 Discs
9097	CLOTRIMAZOLE CLO 50 µg	250 Discs
9097/1	CLOTRIMAZOLE CLO 50 µg	50 Discs
9098	CLARITHROMYCN CLR 15 µg	250 Discs
9098/1	CLARITHROMYCN CLR 15 µg	50 Discs
9099	FURAZOLIDON FR 50 µg	250 Discs
9099/1	FURAZOLIDON FR 50 µg	50 Discs
9100	FURAZOLIDON FR 50 µg	250 Discs
9100/1	FURAZOLIDON FR 50 µg	50 Discs
9101	CEFTIBUTEN CTB 30 µg	250 Discs
9101/1	CEFTIBUTEN CTB 30 µg	50 Discs
9102	LEVOFLOXACIN LEV 5 µg	250 Discs
9102/1	LEVOFLOXACIN LEV 5 µg	50 Discs
9103	MOXIFLOXACIN MOX 5 µg	250 Discs
9103/1	MOXIFLOXACIN MOX 5 µg	50 Discs
9104	CEFEPIME FEP 30 µg	250 Discs
9104/1	CEFEPIME FEP 30 µg	50 Discs
9105	AZITHROMYCN AZM 15 µg	250 Discs
9105/1	AZITHROMYCN AZM 15 µg	50 Discs
9106	MYOKAMYCN MK 15 µg	250 Discs
9106/1	MYOKAMYCN MK 15 µg	50 Discs
9107	ITRACONAZOLE ITC 50 µg	250 Discs
9107/1	ITRACONAZOLE ITC 50 µg	50 Discs
9108	GEFOPEAZONE CFP 75 µg	250 Discs
9108/1	GEFOPEAZONE CFP 75 µg	50 Discs
9109	FOSFOMYCN (includes G-6-p) FOS 200 µg	250 Discs
9109/1	FOSFOMYCN (includes G-6-p) FOS 200 µg	50 Discs
9110	TRIMETHOPRIM TM 5 µg	250 Discs
9110/1	TRIMETHOPRIM TM 5 µg	50 Discs
9111	FUSIDIC ACID FC 30 µg	250 Discs
9111/1	FUSIDIC ACID FC 30 µg	50 Discs
9112	CEFFPROZIL CPR 30 µg	250 Discs

9112/1	CEFFPROZIL CPR 30 µg	50 Discs
9113	LOMEFLOXACIN LOW 10 µg	250 Discs
9113/1	LOMEFLOXACIN LOW 10 µg	50 Discs
9115	AMPICILLIN AMP 2 µg	250 Discs
9115/1	AMPICILLIN AMP 2 µg	50 Discs
9116	LINCOSAMYCN MY 15 µg	250 Discs
9116/1	LINCOSAMYCN MY 15 µg	50 Discs
9117	NOVOBIOCHIN NO 5 µg	250 Discs
9117/1	NOVOBIOCHIN NO 5 µg	50 Discs
9118	RIFAMPICIN RD 5 µg	250 Discs
9118/1	RIFAMPICIN RD 5 µg	50 Discs
9119	METRONIDAZOLE MTZ 50 µg	250 Discs
9119/1	METRONIDAZOLE MTZ 50 µg	50 Discs
9120	POLYMYXIN B PB 300 U	250 Discs
9120/1	POLYMYXIN B PB 300 U	50 Discs
9121	FOSFOMYCN (includes G-6-p) FOS 100 µg	250 Discs
9121/1	FOSFOMYCN (includes G-6-p) FOS 100 µg	50 Discs
9122	AMPLICLOX (Ampicillin-Cloxacillin) ACL 30 µg	250 Discs
9122/1	AMPLICLOX (Ampicillin-Cloxacillin) ACL 30 µg	50 Discs
9124	GENTAMICIN CN 120 µg	250 Discs
9124/1	GENTAMICIN CN 120 µg	50 Discs
9125	GENTAMICIN CN 30 µg	250 Discs
9125/1	GENTAMICIN CN 30 µg	50 Discs
9126	SULFONAMIDE S3 300 µg	250 Discs
9126/1	SULFONAMIDE S3 300 µg	50 Discs
9127	PENCILLIN G P 2 IU	250 Discs
9127/1	PENCILLIN G P 2 IU	50 Discs
9128	CHLORAMPHENICOL C 10 µg	250 Discs
9128/1	CHLORAMPHENICOL C 10 µg	50 Discs
9129	SULBACTAM SU 200 µg	250 Discs
9129/1	SULBACTAM SU 200 µg	50 Discs
9130	PENCILLIN G P 1 IU	250 Discs
9130/1	PENCILLIN G P 1 IU	50 Discs
9131	SODIUM FUSIDATE FO 30	250 Discs
9131/1	SODIUM FUSIDATE FO 30	50 Discs
9132	SULFAPRIM SXT 50 µg	250 Discs
9132/1	SULFAPRIM SXT 50 µg	50 Discs
9133	AMOXICILLIN AML 10 µg	250 Discs
9133/1	AMOXICILLIN AML 10 µg	50 Discs
9134	CEFOTAXIME CTX 75 µg	250 Discs
9134/1	CEFOTAXIME CTX 75 µg	50 Discs
9135	OXACILLIN OX 5 µg	250 Discs
9135/1	OXACILLIN OX 5 µg	50 Discs
9136	LINEZOLID LNZ 30 µg	250 Discs
9136/1	LINEZOLID LNZ 30 µg	50 Discs
9137	AMPHOTERICIN B AMB 10 µg	250 Discs
9137/1	AMPHOTERICIN B AMB 10 µg	50 Discs
9139	ITRACONAZOLE ITC 8 µg	250 Discs
9139/1	ITRACONAZOLE ITC 8 µg	50 Discs
9140	KETOCONAZOLE KCA 15 µg	250 Discs
9140/1	KETOCONAZOLE KCA 15 µg	50 Discs
9141	COLISTIN SULFATE CS 30 UI	250 Discs
9141/1	COLISTIN SULFATE CS 30 UI	50 Discs
9143	CEFEPIME-CLAVULANIC ACID FEL 40 µg	250 Discs
9144	Cefepime-Cloxacillin FOC 230 µg	250 Discs
9144/1	Cefepime-Cloxacillin FOC 230 µg	50 Discs
9145	CEFTAZIDIME-CLAVULANIC ACID CAL 40 µg	250 Discs
9145/1	CEFTAZIDIME-CLAVULANIC ACID CAL 40 µg	50 Discs
9146	CLINDAMYCN CLD 10 µg	250 Discs
9146/1	CLINDAMYCN CLD 10 µg	50 Discs
9147	TIGECYCLIN TGC 15 µg	250 Discs

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9147/1	TIGECYCLIN TGC 15 µg	50 Discs
9148	FLUCYTOSINE AFY 10 µg	250 Discs
9148/1	FLUCYTOSINE AFY 10 µg	50 Discs
9150	SULFADIAZINE SUZ 300 µg	250 Discs
9150/1	SULFADIAZINE SUZ 300 µg	50 Discs
9151/1	AMOXICILLIN AML 2 µg	250 Discs
9152	CEFOTAXIME CTX 5 µg	250 Discs
9152/1	CEFOTAXIME CTX 5 µg	50 Discs
9153	CEFTAZIDIME CAZ 10 µg	250 Discs
9153/1	CEFTAZIDIME CAZ 10 µg	50 Discs
9154	DORIPENEM DOR 10 µg	250 Discs
9154/1	DORIPENEM DOR 10 µg	50 Discs
9155	LINEZOLID LNZ 10 µg	250 Discs
9155/1	LINEZOLID LNZ 10 µg	50 Discs
9156	MECILLINAM MEC 10 µg	250 Discs
9156/1	MECILLINAM MEC 10 µg	50 Discs
9157/1	MUPIROCIIN MUP 200 µg	250 Discs
9158	NITROFURANTOIN F 100 µg	250 Discs
9158/1	NITROFURANTOIN F 100 µg	50 Discs
9159	PIPERACILLIN PRL 30 µg	250 Discs
9159/1	PIPERACILLIN PRL 30 µg	50 Discs
9160	PIPERACILLIN-TAZOBACTAM T2P 36 µg	250 Discs
9160/1	PIPERACILLIN-TAZOBACTAM T2P 36 µg	50 Discs
9161	QUINUPRISTIN-DALEFORISTIN QDA 15 µg	250 Discs
9161/1	QUINUPRISTIN-DALEFORISTIN QDA 15 µg	50 Discs
9162	STREPTOMYCN S 300 µg	250 Discs
9162/1	STREPTOMYCN S 300 µg	50 Discs
9163	TOBRAMYCN TOB 30 µg	250 Discs
9163/1	TOBRAMYCN TOB 30 µg	50 Discs
9164	VANCOMYCN VA 5 µg	250 Discs
9164/1	VANCOMYCN VA 5 µg	50 Discs
9165	CASPOFUNGIN CAS 5 µg	250 Discs
9165/1	CASPOFUNGIN CAS 5 µg	50 Discs
9166	FLUCONAZOLE FLU 25 µg	250 Discs
9166/1	FLUCONAZOLE FLU 25 µg	50 Discs
9167	POSACONAZOLE POS 5 µg	250 Discs
9167/1	POSACONAZOLE POS 5 µg	50 Discs
9168	VORICONAZOLE VO 1 µg	250 Discs
9168/1	VORICONAZOLE VO 1 µg	50 Discs
9169	GATIFLOXACIN GAT 5 µg	250 Discs
9169/1	GATIFLOXACIN GAT 5 µg	50 Discs
9170	NETILMICIN NET 10 µg	250 Discs
9170/1	NETILMICIN NET 10 µg	50 Discs
9171	PHENOXETHYLPENICILLIN PV 10 µg	250 Discs
9171/1	PHENOXETHYLPENICILLIN PV 10 µg	50 Discs
9172	TILTIHROMYCN TEL 15 µg	250 Discs
9172/1	TILTIHROMYCN TEL 15 µg	50 Discs
9173	LORACARBEF LOR 30 µg	250 Discs
9173/1	LORACARBEF LOR 30 µg	50 Discs
9174	NAFOLICIN NAF 1 µg	250 Discs
9174/1	NAFOLICIN NAF 1 µg	50 Discs
9175	MEROPENEM-CLAVACILLIN MR+CL	250 Discs
9175/1	MEROPENEM-CLAVACILLIN MR+CL	50 Discs
9176	Meropenem + Phenyboronic acid MR + BO	250 Discs
9176/1	Meropenem + Phenyboronic acid MR + BO	50 Discs
9177	MEROPENEM-DIPICOLINIC ACID MR+DP	250 Discs
9177/1	MEROPENEM-DIPICOLINIC ACID MR+DP	50 Discs
9178	Meropenem + EDTA MR + ED	250 Discs

9178/1	Meropenem + EDTA MR + ED	50 Discs
9179	AMOXICILLIN AML 25 µg	250 Discs
9179/1	AMOXICILLIN AML 25 µg	50 Discs
9180	ERYTHROMYCN E 2 µg	250 Discs
9180/1	ERYTHROMYCN E 2 µg	50 Discs
9181	NITROFURANTOIN F 50 µg	250 Discs
9181/1	NITROFURANTOIN F 50 µg	50 Discs
9182	CEFOTAXIME-CLAVULANIC ACID CTL 40 µg	250 Discs
9182/1	CEFOTAXIME-CLAVULANIC ACID CTL 40 µg	50 Discs
9183	Impipenam + EDTA IM + ED	250 Discs
9183/1	Impipenam + EDTA IM + ED	50 Discs
9184	COLISTIN SULFATE CS 25 µg	250 Discs
9184/1	COLISTIN SULFATE CS 25 µg	50 Discs
9185	CEPROMONE CR 30 µg	250 Discs
9185/1	CEPROMONE CR 30 µg	50 Discs
9186	TEMOCILLIN TMO 30 µg	250 Discs
9186/1	TEMOCILLIN TMO 30 µg	50 Discs
9187	Sulfamethoxazole SMX 100 µg	250 Discs
9187/1	Sulfamethoxazole SMX 100 µg	50 Discs
9188	Metrondazole MTZ 10 µg	250 Discs
9188/1	Metrondazole MTZ 10 µg	50 Discs
9189	CEFDIOXIME-CLAVULANIC ACID PXL 11 µg	250 Discs
9189/1	CEFDIOXIME-CLAVULANIC ACID PXL 11 µg	50 Discs
9190	AMOXICILLIN-CLAVULANIC ACID AUG 3 µg	250 Discs
9190/1	AMOXICILLIN-CLAVULANIC ACID AUG 3 µg	50 Discs
9191	ROKITAMYCN ROK 30 µg	250 Discs
9191/1	ROKITAMYCN ROK 30 µg	50 Discs
9192	Phenyboronic acid BO	250 Discs
9192/1	Phenyboronic acid BO	50 Discs
9193	DIPICOLINIC ACID DP	250 Discs
9193/1	DIPICOLINIC ACID DP	50 Discs
9194	CEFTAROLINE CPT 5 µg	250 Discs
9194/1	CEFTAROLINE CPT 5 µg	50 Discs
9195	ERTAPENEM-CLAVACILLIN ET+CL	250 Discs
9195/1	ERTAPENEM-CLAVACILLIN ET+CL	50 Discs
9202	Ertapenam+Phenyboronic acid ET+BO	250 Discs
9202/1	Ertapenam+Phenyboronic acid ET+BO	50 Discs
9203	Cefazidime-avibactam CZA 14 µg	250 Discs
9203/1	Cefazidime-avibactam CZA 14 µg	50 Discs
9204	Cefazidime-avibactam CZA 50 µg	250 Discs
9204/1	Cefazidime-avibactam CZA 50 µg	50 Discs
9205	Nitroxalin NI 30 µg	250 Discs
9205/1	Nitroxalin NI 30 µg	50 Discs
9206	Cefazidime-avibactam CZA 14 µg	250 Discs
9206/1	Cefazidime-avibactam CZA 14 µg	50 Discs
9209	Nitroxalin NI 30 µg	250 Discs
9209/1	Nitroxalin NI 30 µg	50 Discs
9219	Cefepime FEP 5 µg	250 Discs
9219/1	Cefepime FEP 5 µg	50 Discs
9220	Cefepime FEP 10 µg	250 Discs
9220/1	Cefepime FEP 10 µg	50 Discs
9224	Cefotaxime + Cloxacillin CTC	250 Discs
9224/1	Cefotaxime + Cloxacillin CTC	50 Discs
9225	Cefazidime + Cloxacillin CAC	250 Discs
9225/1	Cefazidime + Cloxacillin CAC	50 Discs
9246	Cefidizime-avibactam CTA 14 µg	250 Discs

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9504	KGL I (Gram + ve) 1 x 100 Test
9505	KGL II (Gram - ve) 1 x 100 Test
9506	KGL III 100 Test
9507	MULTODISC A
9508	MULTODISC B
9509	MULTODISC C
9510	MULTODISC D
9511	MULTODISC A (100 P2) (Tender1/06/2003)
9512	MULTODISC C (100 P2) (Tender1/06/2003)
9513	MULTODISC D (100 P2) (Tender1/06/2003)
9514	URINE RING (Tender2/30/2006)
9515	PSEUDOMONAS RING (Tender2/30/2006)
9516	GRAM NEGATIVE RING (Tender2/30/2006)
9517	GRAM POSITIVE RING (Tender2/30/2006)
96001	SALMONELLA TYPHI H 20 ml
96002	SALMONELLA TYPHI O 20 ml
96003	SALMONELLA PARATYPHI AH 20 ml
96004	SALMONELLA PARATYPHI AO 20 ml
96005	SALMONELLA PARATYPHI BH 20 ml
96006	SALMONELLA PARATYPHI BO 20 ml
96007	BRUCELLA TOTALE 20 ml
96008	BRUCELLA ABORTUS 20 ml
96009	SALMONELLA TYPHI TOTALE 20 ml CE
96010	SALMONELLA PARATYPHI A TOTALE 20 ml
96011	PROTEUS OXK 20 ml
96012	PROTEUS OX19 20 ml
96013	PROTEUS OX19 20 ml
96014	FEBRILE MULTITEST KIT
96015	STREP-CHECK KIT
96016	STAPH LATEX KIT
96017	SALMONELLA PARATYPHI B TOTALE 20 ml
96018	SALMONELLA PARATYPHI C TOTALE 20 ml
96019	SALMONELLA PARATYPHI CO 20 ml
96020	SALMONELLA PARATYPHI C TOTALE 20 ml
96021	SALMONELLA PARATYPHI C TOTALE 20 ml
96022	BRUCELLA MELITENSIS 20 ml
96023	BRUCELLA SUIS 20 ml
96024	SALMONELLA TYPHI H SLIDE 5 ml
96025	SALMONELLA TYPHI O SLIDE 5 ml
96026	SALMONELLA TYPHI A TOTALE 5 ml SLIDE
96027	SALMONELLA PARATYPHI AH SLIDE 5 ml
96028	SALMONELLA PARATYPHI AO 5 ml SLIDE
96029	SALMONELLA PARATYPHI BO 5 ml SLIDE
96030	SALMONELLA PARATYPHI B TOTALE 5 ml SLIDE
96031	SALMONELLA PARATYPHI C 5 ml SLIDE
96032	SALMONELLA TYPHI O SLIDE 5 ml
96033	SALMONELLA TYPHI A TOTALE 5 ml SLIDE
96034	SALMONELLA PARATYPHI AH SLIDE 5 ml
96035	SALMONELLA PARATYPHI AO 5 ml SLIDE
96036	SALMONELLA PARATYPHI BO 5 ml SLIDE
96037	SALMONELLA PARATYPHI B TOTALE 5 ml SLIDE
96038	SALMONELLA PARATYPHI C 5 ml SLIDE
96039	SALMONELLA PARATYPHI B TOTALE 5 ml SLIDE
96040	SALMONELLA PARATYPHI C 5 ml SLIDE
96041	SALMONELLA PARATYPHI CO 5 ml SLIDE
96042	SALMONELLA PARATYPHI C TOTALE 5 ml SLIDE
96043	BRUCELLA TOTALE SLIDE 5 ml SLIDE
96044	BRUCELLA ABORTUS SLIDE 5 ml
96045	BRUCELLA MELITENSIS SLIDE 5 ml
96047	PROTEUS OX2 5 ml SLIDE
96048	PROTEUS OX19 5 ml SLIDE
96049	PROTEUS OXK 5 ml SLIDE
96050	CONTROLLO NEGATIVO/NEGATIVE CONTROL 0.5ml
96051	POSITIVE CONTROL FOR SALMONELLA 0.5ml
96052	POSITIVE CONTROL FOR PROTEUS 0.5ml
96053	POSITIVE CONTROL FOR BRUCELLA 0.5ml
96142	Legionella Latex Kit
96143	CAMPYLOBACTER LATEX KIT

96144	CLOSTRIDIUM DIFFICILE LATEX KIT
96148	SHIGELLA ANTISERUM
96150	E. COLI O157 LATEX KIT
96151	SALMONELLA LATEX KIT
96153	STREPTO B LATEX KIT
96154	STREPTO A LATEX KIT
96155	BENCE JONES LATEX TEST
96316	Clostridium difficile GDH Card
96317	Classidium Difficile Toxin A+B Card
96318	Giardia Card
96319	Listeria Monocytogenes Card
96320	Salmoneila Ag Card
96321	O157 E-coli Card
96401	ONE STEP AMP DRMG SCREEN 20 CARDS
96404	ONE STEP COC DRMG SCREEN
96405	ONE STEP THC DRMG SCREEN
96406	ONE STEP M-AMP DRMG SCREEN 20 CARDS
96415/20	FECAL OCCULT BLOOD CARD
96418	STREPTO A CARD 30 CARDS
96441	Gonorrhea Ag Card
96442	Gardnerella Vaginalis Card
96443	Trichomonas Vaginalis Card
96444	B.J. Free Kapaalambda Dipstick
96445	H-PYLORI CARO 20 CARD
96460	HCG URINE/SERUM CARD 50 CARD
96461	HCG URINE/SERUM CARD 100 CARD
96462	MICROALBUMIN CARD URINE 20 Cards
96465	AFP -ALFA FETO CARD 20 CARDS
96468	TUBERCULOSI CARD : 20 CARDS
96480	IgE TOTAL CARD
96485	CEA CARD 20 Cards
96487	MYOGLOBIN
96488	TROPONIN 20 CARDS
96490	FERRITIN CARD
96495	SIFILIDE CARD 20 CARDS
96498	IM MONONUCLEOSIS INFECTION 20 CARDS
96590	URINE STRIP
96699	Glietto 2
96900	GIOTTO READER
96909	BIOMIC V3
96914	BIOMIC V3 AST
96915	BIOMIC V3 ID
96916	BIOMIC V3 CC
96919	AST Software
96931	ID Software
96932	CC Software
96933	Microplastre 96 pozzetti Software
97800	ROTASTICK ONE STEP KIT 20 Test
97801	RSV STICK ONE STEP 20 Test
97802	H-PYLORI COMBI STICK ONE STEP 20 Test
97803	H-PYLORI FECAL Ag ONE STEP 20 Test
97807	ADENCSTICK ONE STEP ASSAY 20 Test
97809	Strigiplo B Card
9989	Blank Discs
99003	KPCAMBL disc kit (acc. to EUCAST)
99004	ESBL disc kit (acc. to EUCAST)
99005	ESBL disc kit (acc. to CLSI)
99006	ESBL (Chromos. Ind. AmpC) disc kit (acc. to EUCAST)
99007	KPCAMBL/KOXA-48 disc kit (acc. to EUCAST)
99008	ESBL+ AmpC screen disc kit

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99009 AmpC disc kit

Direttore Tecnico/ Technical Director
Dr. Silvio Brocco



20/6 1 (por 1)



Clostridium perfringens Agar Base

Basal medium for detection of *C. perfringens* from clinical specimens and other materials according to ISO 7937 and ISO 14189.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Casein	15.0
Enzymatic Digest of Soya	5.0
Yeast Extract	5.0
Sodium Disulfite Anhydrous	1.0
Iron(III)-Ammonium Citrate	1.0
Agar	15.0
Final pH 7.6 ± 0.2 at 25°C	

DESCRIPTION
Clostridium perfringens Agar Base is a basal medium used either on its own or with selective agents for the presumptive identification of Clostridium perfringens from clinical specimens, food, water and environmental samples.

D-Cycloserine can be added to this culture medium to comply with the specifications given by ISO 7937, ISO 14189 and APHA. When supplemented with polymyxin B and kanamycin, the medium conforms to the formulation developed by Shahidi and Ferguson. If used without any supplement added, this medium is known as Iron Sulfite Agar and recommended by ISO 15213 for the enumeration of sulfite-reducing bacteria growing under anaerobic conditions.

PRINCIPLE
Enzymatic digest of casein and enzymatic digest of soya provide amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Yeast extract is a rich source of vitamins of B-group. Ferric ammonium citrate and sodium metabisulfite are H₂S indicators. Agar is the solidifying agent. Clostridia reduce sulfite to sulfide which reacts with iron to form a black iron sulfide precipitate.

One of the following selective supplements can be added to the medium:

- Clostridium perfringens (T.S.C.) Supplement (ref. 81011), containing D-Cycloserine as inhibitor of accompanying flora;
- Kanamycin/Polymyxin B Supplement (ref. 81031);
- D-Cycloserine 4-MUP Supplement (ref. 81098), which contains in addition to D-Cycloserine, 4-Methyl-umbelliferyl-phosphate (MUP) to detect acid phosphatase by its fluorescence under UV light.

PREPARATION
Suspend 52.0 g of powder in 1 liter of distilled or deionized water (*). Heat to boiling until completely dissolved. Autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically, add rehydrated content of 2 vials (10 ml) of:

- Clostridium perfringens (T.S.C.) Supplement for TSC (Tyrosine Sulfite Cycloserine Agar) Agar or
- Kanamycin/Polymyxin B Supplement for SFP (Shahidi-Ferguson) Agar or
- D-Cycloserine 4-MUP Supplement for ISD-Agar with MUP.

Mix well and pour in Petri dishes.

(* If desired, 100 ml Egg Yolk Emulsion (ref. 80219) can also be added after sterilization to detect lecithinase activity (not indicated in ISO 7937 or ISO 14189 either). Take this into account for calculating the final volume of 1.01 liters. For either TSC-Agar or SFP-Agar used as an overlay, the egg yolk emulsion is omitted. Its inclusion does not improve the lecithinase reaction and diminishes the visibility of the colonies.

TECHNIQUE
Inoculate the medium by streak/spread plating, pour-plate method or using the membrane filtration technique. Incubate plates anaerobically at 37 ± 1°C (food examination) or 44 ± 1°C (water analysis) for 18-24 hours.

INTERPRETATION OF RESULTS
Count all black colonies on the plates. For confirming presumptive colonies of Clostridium perfringens the following tests are recommended: reduction nitrate to nitrite (+), motility test (-), gelatine liquefaction (+).
On TSC-Agar with MUP, fluorescence is detected with an UV lamp: light blue fluorescing black colonies indicate C. perfringens.

STORAGE
The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS
The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used only by properly trained operators.

DISPOSAL OF WASTE
Disposal of waste must be carried out according to national and local regulations in force.



REFERENCES

1. EN ISO 11133:2014, Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media.
2. ISO 14189:2011, Water quality - Enumeration of Clostridium perfringens - Method using membrane filtration.
3. ISO 1937:2004, Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Clostridium perfringens - Colony-count technique.
4. ISO 15213:2003, Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of sulfite-reducing bacteria growing under anaerobic conditions.
5. Rapporti ISTISAN 07/15 ISSA 055 Rev.00: Determinazione di Clostridium perfringens (solo su acque provenienti o contaminate da acque superficiali).
6. Daniels F.P., editor, (2001) Compendium of methods for the microbiological examination of foods, 4th ed., American Public Health Association, Washington, D.C.
7. Haeftli, A.H.W., and P. Hismeler (1974) Evaluation and modifications of media for enumeration of C. perfringens. App. Microbiol. 29:688.
8. Haron, S.M., O.A. Kauler and J.T. Peeler (1971) Improved medium for enumeration of Clostridium perfringens. App. Microbiol. 21:500-606.
9. Shahidi, SA and AR Ferguson (1971) App. Microbiol. 21:500-606.



PRODUCT SPECIFICATIONS

NAME Clostridium perfringens Agar Base	
PRESENTATION Dehydrated medium	
STORAGE 10-30°C	
PACKAGING	
Ref.	Content
B10207	500 g of powder in plastic bottle
B20207	100 g of powder in plastic bottle
pH OF THE MEDIUM 7.6 ± 0.2	

USE
 Clostridium perfringens Agar Base is a medium used with supplements for the selective isolation and differentiation of *C. perfringens* from clinical specimens, food, water and environmental samples according to ISO 7937, ISO 14189 and APHA

TECHNIQUE
 Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
 Dehydrated medium
 Appearance: free-flowing, homogeneous
 Colour: beige

Prepared medium
 Appearance: clear (opaque if egg yolk emulsion has been added)
 Colour: amber

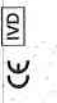
SHELF LIFE
 4 years

QUALITY CONTROL
 1. Control of general characteristics, label and print
 2. Microbiological control
 Complete medium: TSC Agar
 Inoculum for productivity: 50-100 CFU
 Inoculum for selectivity: 10⁶·10⁸ CFU
 Incubation Conditions: 20 ± 2 h at 37 ± 1°C (*) and/or 18-24 h at 44 ± 1°C (*), in anaerobiosis

Microorganism	Growth	Colony Appearance
<i>Clostridium perfringens</i> **	Good	Black colonies
<i>Escherichia coli</i> *	Inhibited	—
<i>Bacillus subtilis</i> *	Inhibited	—

TABLE OF SYMBOLS

LOT	Batch code	IVD	In vitro Diagnostic Medical Device		Manufacturer	Use by		Fragile, handle with care	
REF	Catalogue number		Temperature limitation		Contains sufficient for <n> tests		Caution, consult instructions for use		Do not reuse





Lot 1 (1099)

CLOSTRIDIUM *perfringens* (T.S.C.) Supplement

ENGLISH

Selective supplement for the identification and enumeration of *Clostridium perfringens*, according to ISO 7937 and ISO 14189.

DESCRIPTION

CLOSTRIDIUM *perfringens* (T.S.C.) Supplement is a selective supplement for the identification and enumeration of *Clostridium perfringens*, according to ISO 7937 and ISO 14189. CLOSTRIDIUM *perfringens* (T.S.C.) Supplement is added to CLOSTRIDIUM *perfringens* (T.S.C.) AGAR BASE, ref. 610207 - 620207.

KIT CONTENTS

Each kit contains:

- 10 bottles of lyophilised CLOSTRIDIUM *perfringens* (T.S.C.) Supplement
- 1 instruction sheet.

PRINCIPLE OF THE METHOD

CLOSTRIDIUM *perfringens* (T.S.C.) Supplement contains the antibiotic D-cycloserine that inhibits the accompanying bacterial flora.

COMPOSITION

CLOSTRIDIUM <i>perfringens</i> (T.S.C.) Supplement		
	Content / bottle	Content / liter of medium
D-cycloserine	200 mg	400 mg

PROCEDURE FOR USE

1. Aseptically reconstitute the content of a bottle of CLOSTRIDIUM *perfringens* (T.S.C.) Supplement with 5 ml of sterile distilled water. Shake until completely dissolved avoiding foam formation.
2. Aseptically add the whole contents of one bottle (5 ml) to 500 ml CLOSTRIDIUM *perfringens* (T.S.C.) AGAR BASE*, (ref. 610207 - 620207), autoclaved and cooled to 45-50°C
3. Mix with care and distribute into final containers as indicated in the instruction sheet of the medium being prepared.

*If desired, 50 ml Egg Yolk Emulsion, ref. 80219 can be added to the medium to detect lecithinase activity (not indicated in ISO 7937 or ISO 14189).

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical sheet of the medium being prepared.

QUALITY CONTROL

1. Visual inspection: white lyophilized, limpid colourless solution once reconstituted.
2. Microbiological control.

Inoculate prepared plates with the strains indicated below. Incubate inverted plates at 35 ± 2°C for 18-24 hours under anaerobic conditions.

Microorganism	ATCC®	Growth	Color
<i>Clostridium perfringens</i>	ATCC® 13124	Good	Black colonies (with a halo if egg yolk emulsion has been added)
<i>Escherichia coli</i>	ATCC® 25922	Inhibited	---

PRECAUTIONS

CLOSTRIDIUM *perfringens* (T.S.C.) Supplement is not classified as dangerous under current legislation. For its use, it is anyway recommended to consult the safety data sheet. This product is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

Store CLOSTRIDIUM *perfringens* (T.S.C.) Supplement at 2-8°C in its original packaging. In such conditions it will remain valid until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration.

REFERENCES

- Häuschild, A.H.W., Hilsheimer, R., and Griffith, D.W. 1974. Enumeration of faecal *Clostridium perfringens* spores in egg yolk-free Tryptose – Sulfite – Cycloserine Agar. Appl. Microb., 27:527-530.
- EN ISO 7937: 2004. Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of *Clostridium perfringens* – Colony count technique.
- ISO 14189: 2011. Water quality – Enumeration of *Clostridium perfringens* – Method using membrane filtration.

PRESENTATION

Product	REF	Σ
CLOSTRIDIUM <i>perfringens</i> (T.S.C.) Supplement	81011	10 bottles

TABLE OF SYMBOLS

LOT Batch code	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	



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Rev.2 / 21.02.2014

Lab 2 part 1



CLOSTRIDIUM DIFFICILE AGAR

Medium for the isolation of *Clostridium difficile*.

TYPICAL FORMULA	(g/l)
Protease Peptone	40.0
Fructose	6.0
Sodium Hydrogen Phosphate	5.0
Potassium Dihydrogen Phosphate	1.0
Magnesium Sulphate	0.1
Sodium Chloride	2.0
Agar	15.0
Final pH 7.4 ± 0.2 at 25°C	

DESCRIPTION
CLOSTRIDIUM DIFFICILE AGAR is a medium used for the isolation of *Clostridium difficile*.

PRINCIPLE

Protease peptone provides nitrogen, vitamins, minerals and amino acid essential for growth. Fructose is the fermentable carbohydrate used to facilitate the recovery and growth of *C. difficile*. Potassium dihydrogen phosphate and disodium hydrogen phosphate act as buffering system. Magnesium sulphate is source of magnesium ions essential for several enzymatic reactions and DNA replication. Sodium chloride maintains the osmotic balance of the medium. This basal medium needs to be added with horse blood that supplies essential growth factors and selective agents to inhibit the growth of most of the microorganisms present in fecal sample other than *C. difficile*.

PREPARATION

Suspend 34.6 g of powder in 500 ml of distilled water. Heat until completely dissolved. Autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically add 1 ml of CLOSTRIDIUM difficile Supplement (ref. 81007) previously reconstituted with 2 ml of sterile distilled water and 35 ml of HORSE BLOOD DEFIBRINATED (ref. 83395). Mix gently and dispense in Petri dishes.

TECHNIQUE

Direct inoculum of fecal samples
Lightly inoculate the medium with fecal sample spreading part of the original inoculum in order to obtain well separated colonies. Incubate the plates at 36-41°C for 18-24 hours anaerobically.

Treatment for alcohol shock

Mix equal part of absolute ethyl alcohol and the fecal specimen. Homogenize using a vortex mixer. Leave at room temperature of 1 hour. Inoculate the medium and incubate the plates at 36-41°C for 18-24 hours anaerobically.

INTERPRETATION OF RESULTS

C. difficile grows with whitish opaque colonies of 4-6mm diameter irregular.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

- Levetz (1965) J. Clin. Pathol. 38: 233-234.
- Bariati, J.G. et al. (1978) N. Eng. J. Med., 298, 531.
- Bonello, S.P. et al. (1981) J. Antimicrob. Chemother., 7 Supp. A, 53-62.
- George, R.H. et al. (1976) J. Clin. Microbiol. 6: 214-219.



PRODUCT SPECIFICATIONS

NAME
CLOSTRIDIUM DIFFICILE AGAR

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

PACKAGE	Content	Packaging
610115	500 g	500 g of powder in plastic bottle
620115	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
7.4 ± 0.2

USE
CLOSTRIDIUM DIFFICILE AGAR is a medium used for the isolation of *Clostridium difficile*

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Dehydrated medium

Appearance: free-flowing, homogeneous
Colour: beige

Prepared medium
Appearance: opalescent
Colour: cherry red

SHELF LIFE
4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 10-100 CFU/ml
Inoculum for selectivity: 10⁸-10⁹ CFU/ml
Inoculum for specificity: 5*10⁸ CFU/ml
Incubation conditions: 18-24 h at 36 ± 1°C anaerobically

Microorganism

Escherichia coli ATCC® 25922 Inhibited
Clostridium difficile ATCC® 9899 Good

TABLE OF SYMBOLS

LOT	Batch code	IVD	In vitro diagnostic medical device	Manufacturer	Use by		Fragile, handle with care
REF	Catalogue number		Temperature limitation		Consult instruction for use		Do not reuse
	Keep away from heat sources						



Lob 2/p092

CLOSTRIDIUM difficile Supplement

ENGLISH

Selective supplement for the enrichment of the medium CLOSTRIDIUM difficile AGAR BASE for the isolation of *Clostridium difficile*

DESCRIPTION

CLOSTRIDIUM difficile Supplement is a selective supplement for the isolation of *Clostridium difficile*, made of a una freeze-dried D-Cicloserin and Cefoxitin mixture. CLOSTRIDIUM difficile Supplement is used for the selective enrichment of CLOSTRIDIUM difficile AGAR BASE medium code 610115 or 620115.

PACKAGE CONTENTS

Each package contains:

- 10 bottles of freeze-dried CLOSTRIDIUM difficile Supplement
- 1 instruction sheet

PRINCIPLE OF THE METHOD

The selectivity of CLOSTRIDIUM difficile Supplement, set by Levett, is due to the activity of D-Cicloserin and Cefoxitin which inhibit the growth of most of Enterobacteriaceae, such as *Enterococcus faecalis*, stafilococci, Gram-negative anaerobic non sporogens bacilli and some strains of Clostridia except for *C. difficile*.

COMPOSITION

CLOSTRIDIUM difficile Supplement		
	Content / bottle	Content / l of medium
Cicloserin	125.0 mg	250.0 mg
Cefoxitin	4.0 mg	8.0 mg

TEST PROCEDURE

1. Reconstitute aseptically the content of one bottle of CLOSTRIDIUM difficile Supplement with 2 ml of sterile distilled water. Shake until completely dissolved, avoiding foam formation.
2. Add aseptically the entire content of one bottle (2 ml) to 500 ml of CLOSTRIDIUM difficile Agar Base medium code 610115-620115 autoclaved, cooled at 45-50 °C and with the addition of 7% of defibrinated horse blood (in this case preferred to ram's blood).
3. Mix with care.
4. Distribute into Petri dishes.

TECHNIQUE AND INTERPRETATION OF RESULTS

Refer to the technical documentation for CLOSTRIDIUM difficile AGAR BASE code 610115 or 620115.

QUALITY CONTROL

1. Control of the appearance: freeze-dried product, white colour.
2. Microbiological control .

Prepare the plates using as base CLOSTRIDIUM difficile AGAR BASE code 610115 or 620115 supplemented with CLOSTRIDIUM difficile Supplement (1 bottle in 500 ml of medium) and with 7% of defibrinated horse blood. Plates are inoculated with the strains indicated in the microbiological control table.

Incubation conditions: 24 h at 36 ± 1 °C, in anaerobiosis.

Microbiological control:

	Control strains	Growth
<i>Clostridium difficile</i>	ATCC 11204	Good
<i>Escherichia coli</i>	ATCC 25922	Inhibited

PRECAUTIONS

The product CLOSTRIDIUM difficile Supplement is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use.

CLOSTRIDIUM difficile Supplement is a selective supplement to be used only for *in vitro* diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

Store CLOSTRIDIUM difficile Supplement at 2-8 °C in its original packaging. In such conditions CLOSTRIDIUM difficile Supplement will remain valid until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration.

REFERENCES

- Levett (1985) J. Clin. Pathol. 38. 233-234.
- Hall, I. and O'Toole, E. (1935) Am. J. Dis. Child. 49. 390.

PRESENTATION

Product	REF	Σ
CLOSTRIDIUM difficile Supplement	81007	10 bottles

One bottle is sufficient to prepare 500 ml of medium.

TABLE OF SYMBOLS

IVD In Vitro Diagnostic Medical Device	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	LOT Batch code



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Rev.0 / 06.04.2005

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BRUCELLA AGAR BASE

Basal medium for selective isolation of *Brucella* spp.

TYPICAL FORMULA	(g/l)
Peptone	10.0
Meat Extract	5.0
Glucose	10.0
Sodium Chloride	5.0
Agar	15.0
Final pH = 7.5 ± 0.2 at 25 °C.	

DIRECTIONS

Suspend 45.0 g of powder in 1 liter of distilled or deionized water. Heat until completely dissolved. Sterilize in autoclave at 121 °C for 15 minutes. Cool to 45-50 °C. Aseptically add 5-10% of inactivated horse serum, 1-5% of sterile glucose and 2 vials of Brucella supplement (code 81003), reconstituted with 10 ml of a 1:1 solution of methanol and sterile distilled water and incubated at 36 ± 1 °C for 10-15 minutes. Mix well and distribute into Petri dishes.

BRUCELLA supplement

1 Vial contents (each vial is sufficient for 500 ml of medium):
Polymyxin B 2,5000 IU
Bacitracin 12,500 IU
Cycloheximide 50.0 mg
Nalidixic Acid 2.5 mg
Nystatin 50,000 IU
Vancomycin 10.0 mg

DESCRIPTION

BRUCELLA AGAR BASE is a basal medium for isolation of all biotypes of *Brucella*.

TECHNIQUE

Inoculate the medium spreading the specimen over its surface using a bent sterile glass rod and incubate at 36 ± 1 °C for 72-96 hours in 10-20% CO₂ atmosphere. *Brucella* colonies appear as 1-2 mm diameter convex colonies with round entire edges, and may be identified by slide agglutination.

QUALITY CONTROL

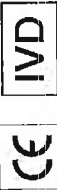
Dehydrated medium
Appearance: free-flowing, homogeneous.
Color: beige.
Prepared medium
Appearance: slightly opalescent.
Color: light amber.
Incubation conditions: 36 ± 1 °C for 24-72 hours at 5-10% CO₂.

Microorganism ATCC Growth

<i>Brucella abortus</i>	4315	good
<i>Staphylococcus aureus</i>	25923	inhibited
<i>Escherichia coli</i>	25922	inhibited

PERFORMANCE AND LIMITATIONS

Colonies, examined in indirect sunlight, appear translucent, with a slightly amber tinge. OMS recommends the use of thionine and basic fuchsin resistance tests to differentiate *Brucella melitensis*, *Brucella abortus*, *Brucella suis*. Since the nutritional requirements of microorganisms are different, some strains may be encountered that fail to grow or grow poorly on this medium.



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STORAGE

The powder is very hygroscopic; store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.
Store prepared plates at 2-8 °C.

REFERENCES

1. Moyer, N.P., and L.A. Holcomb (1995). *Brucella*, p. 549-555.
2. Vandezaan, C., and D.F. Spittsnesser (ed.) (1992). Compendium of methods for the microbiological examination of food, 3rd ed. American Public Health Association, Washington, D.C.
3. Alton, Jones (1966). *La brucellose techniques de laboratoire*. Geneve. OMS.

PRESENTATION

Product	REF	
BRUCELLA AGAR BASE (11.1 l)	610079	500 g
BRUCELLA AGAR BASE (2.2 l)	620079	100 g
BRUCELLA supplement	81003	10 vials

TABLE OF SYMBOLS

LOT		Batch code		Caution, consult accompanying documents		Manufacturer		In Vitro Diagnostic Medical Device
REF		Catalogue number		Fragile, handle with care		Use by		Temperature limitation
								Keep away from heat source



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BRUCELLA Supplement

Selective supplement for the isolation of *Brucella* spp.

Lot 4 1022

ENGLISH

DESCRIPTION

BRUCELLA Supplement is a selective supplement for the isolation of *Brucella* spp from milk. The selective supplement is made of a freeze-dried antibiotics mixture: Polymyxin B, Bacitracin, Cycloheximide, Nalidixic acid, Nystatin, Vancomycin. BRUCELLA Supplement is used for selective enrichment of culture media Brucella Agar Base code 610079 or 620079, Columbia Agar Base code 610013 or 620013, Blood Agar Base N.2 code 610188 or 620188.

KIT CONTENTS

Each kit contains:

- 10 bottles of freeze-dried BRUCELLA Supplement
- 1 Instruction sheet

PRINCIPLE OF THE METHOD

The slow growth of *Brucella* species requires the presence of selective agents inside medium that avoid excessive growth of contaminant microorganisms present in the sample in examination. Polymyxin B is a broad-spectrum antibiotic, Bacitracin interferes with the synthesis of bacterial wall and it is active mostly against Gram-positive bacteria, Cycloheximide and Nystatin have antimycotic activity, Nalidixic acid is an active quinolone against Gram-negative bacteria, Vancomycin inhibits the synthesis of cell wall in Gram-positive bacteria.

COMPOSITION

BRUCELLA Supplement		
	Contents / bottle	Contents / l of medium
Polymyxin B	2500 UI	5000 UI
Bacitracin	12500 UI	25000 UI
Cycloheximide	50,0 mg	100,0 mg
Nalidixic acid	2,5 mg	5,0 mg
Nystatin	50000 UI	100000 UI
Vancomycin	10,0 mg	20,0 mg

PROCEDURE FOR USE

1. Aseptically reconstitute the contents of one bottle of BRUCELLA Supplement with 10 ml of a solution of methanol and sterile distilled water in the ratio 1:1. Incubate at 36 ± 1 °C for 10-15 minutes. Shake until completely dissolved, avoiding foam formation.
2. Aseptically add the entire contents of one bottle (10 ml) to 500 ml of Brucella Agar Base medium code 610079 or 620079, Columbia Agar Base medium code 610013 or 620013, Blood Agar Base N.2 medium code 610188 or 620188, autoclaved, cooled at 45-50 °C with the addition of 10% of inactivated horse serum and 1-5% of sterile glucose solution.
3. Mix with care.
4. Distribute into Petri dishes.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical documentation for Brucella Agar Base medium code 610079 or 620079, or Columbia Agar Base medium code 610013 or 620013, or Blood Agar Base N.2 medium code 610188 or 620188.

QUALITY CONTROL

1. Control of the appearance: freeze-dried product, colour orange.
2. Microbiological control.

Prepare the plates using as base BRUCELLA AGAR BASE code 610079 or 620079 supplemented with 5% of inactivated horse serum and 1% of sterile glucose solution, and enriched with BRUCELLA Supplement (1 bottle in 500 ml of medium). Plates are inoculated with the strains indicated in the microbiological control table.

Incubation conditions: 48 h at 36 ± 1 °C, in atmosphere with 5-10% of CO₂.

Microbiological control

Control strains		Growth
<i>Brucella abortus</i>	ATCC 4315	Good
<i>Staphylococcus aureus</i>	ATCC 25923	Inhibited
<i>Escherichia coli</i>	ATCC 25922	Inhibited

PRECAUTIONS

The product BRUCELLA Supplement is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use.

BRUCELLA Supplement is a selective supplement to be used only for *in vitro* diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

Store BRUCELLA Supplement at 2-8 °C in its original packaging. In such conditions BRUCELLA Supplement will remain valid until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration.

REFERENCES

- Moyer, N.P., and L.A. Holcomb (1995). *Brucella*, p. 549-555.
- Vanderzant, C., and D.F. Splittstoesser (ed.) (1992). *Compendium of methods for the microbiological examination of food*, 3rd ed. American Public Health Association, Washington, D.C.
- Alton, Jones (1968). *La brucellose techniques de laboratoire*. Geneve: OMS.

PRESENTATION

Product	REF	Σ
BRUCELLA Supplement	81003	10 bottles

One bottle is sufficient to prepare 500 ml of medium

TABLE OF SYMBOLS

IVD In Vitro Diagnostic Medical Device	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	LOT Batch code



LIOFILCHEM Bacteriology Products

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Rev.0 / 06.04.2005

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BORDET GENGOU AGAR

Medium for *Bordetella* spp isolation.

TYPICAL FORMULA	(g/l)
Potato, infusion from	4.5
Peptone	5.0
Tryptone	5.0
Sodium Chloride	5.5
Agar	16.0
Final pH = 6.7 ± 0.2 at 25 °C.	

DIRECTIONS

Suspend 36.0 g of powder in 1 liter of distilled or deionized water. Add 10 ml of glycerol. Heat to boiling until completely dissolved. Sterilize in autoclave at 121 °C for 15 minutes. Cool to 45-50 °C and aseptically add 15-20% sterile defibrinated sheep blood and 2 vials of Bordetella supplement (cephalexin 20 mg/vial) (code 81013) rehydrated with 5 ml of sterile distilled water. Mix well. Dispense in petri dishes. Final medium will contain 40 mg/l of cephalixin.

DESCRIPTION

BORDET GENGOU AGAR is used with added blood and Bordetella supplement, for isolating *Bordetella pertussis* and other *Bordetella* species.

TECHNIQUE

Inoculate the medium with the specimen to examine spreading with a swab and incubate at 36 ± 1 °C for 3-5 days for isolating *Bordetella pertussis*. Other *Bordetella* species can appear in 1-3 days. Otherwise allow the patient to cough directly on the plate at a distance of about 10 cm from mouth. The colonies of *Bordetella pertussis* appear small, droppshaped, transparent, shiny and surrounded by a characteristic zone of hemolysis that is not sharply defined but merges diffusely into the medium.

QUALITY CONTROL

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: beige.

Prepared medium

Appearance: opaque.

Color: cherry red.

Incubation conditions: 36 ± 1 °C for 48-72 hours.

Microorganism

Bordetella pertussis 1

Bordetella parapertussis MDH

ATCC

8467

32472

Growth

good

good

PERFORMANCE AND LIMITATIONS

Since nutritional requirements of organisms vary, some strains of *Bordetella* may be encountered that grow poorly or fail to grow on this medium.

STORAGE

The powder is very hygroscopic; store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label (or until signs of deterioration or contamination are evident). Store prepared plates at 2-8 °C.

REFERENCES

- Bordet, J., and D. Gengou. 1906. Le microbe de la coqueluche. Ann. Inst. Pasteur 20: 731.
- Iseberg, H.D. (ed.). 1992. Clinical microbiology procedures handbook, vol. 1. American Society of Microbiology, Washington, D.C.



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PRESENTATION	REF	
BORDET GENGOU AGAR (13.8 l)	610006	500 g
BORDET GENGOU AGAR (2.7 l)	620006	100 g
BORDETELLA supplement Cephalexin 20 mg/ vial	81013	10 vials
SHEEP BLOOD DEFIBRINATED	83296	50 ml

TABLE OF SYMBOLS

LOT Batch code		Caution, consult accompanying documents		Manufacturer		In Vitro Diagnostic Medical Device
REF Catalogue number		Fragile, handle with care		Use by		Temperature limitation
						Keep away from heat source



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Lot 5 part 1



Lofsp2

BORDETELLA Supplement

ENGLISH

Selective supplement for the enrichment of BORDET GENGOU AGAR BASE medium for the isolation of *Bordetella* spp.

DESCRIPTION

BORDETELLA Supplement is a selective supplement for the isolation of *Bordetella pertussis* and other species of *Bordetella*, made of Cephalexin freeze-dried. BORDETELLA Supplement is used for the selective enrichment of Bordet Gengou Agar Base medium code 610006 or 620006.

KIT CONTENTS

Each kit contains:

- 10 bottles of freeze-dried BORDETELLA Supplement
- 1 Instruction sheet

PRINCIPLE OF THE METHOD

La Cephalexin is a cephalosporins is a broad-spectrum antibiotic, active against both Gram-positive bacteria and Gram-negative bacteria.

COMPOSITION

BORDETELLA Supplement		
	Contents / bottle	Contents / l of medium
Cephalexin	20.0 mg	40.0 mg

PROCEDURE FOR USE

1. Aseptically reconstitute the contents of one bottle of BORDETELLA Supplement with 5 ml of sterile distilled water. Shake until completely dissolved, avoiding foam formation.
2. Aseptically add the entire contents of one bottle (5 ml) to 500 ml of Bordet Gengou Agar Base medium code 610006-620006, autoclaved, cooled at 45-50 °C and with the addition of 15-20% of defibrinated ram's blood.
3. Mix with care.
4. Distribute into Petri dishes.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical documentation for Bordet Gengou Agar Base code 610006-620006.

QUALITY CONTROL

1. Control of the appearance: freeze-dried product, white colour.
2. Microbiological control.

Prepare the plates using Bordet Gengou Agar Base code 610006 or 620006 enriched with BORDETELLA Supplement (1 bottle in 500 ml of medium) and with 15% of defibrinated ram's blood. Plates are inoculated with the strains indicated in the microbiological control table.

Incubation conditions: 48 h at 36 ± 1 °C.

Microbiological control

Control strains		Growth
<i>Bordetella pertussis</i>	ATCC 8467	Good
<i>Bordetella parapertussis</i>	MDH 32472	Good
<i>Staphylococcus aureus</i>	ATCC 25923	Inhibited
<i>Escherichia coli</i>	ATCC 25922	Inhibited

PRECAUTIONS

The product BORDETELLA Supplement is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use.

BORDETELLA Supplement is a selective supplement to be used only for *in vitro* diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

Store BORDETELLA Supplement at 2-8 °C in its original packaging. In such conditions BORDETELLA Supplement will remain valid until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration.

REFERENCES

- Bordet, J., and D. Gengou. 1906. Le microbe de la coqueluche. Ann. Inst. Pasteur 20: 731.
- Isenberg, H.D. (ed.). 1992. Clinical microbiology procedures handbook, vol. 1. American Society of Microbiology, Washington, D.C.
- Regan J., and Lowe F. (1977) J. Clin. Microbiol. 6: 303-309.

PRESENTATION

Product	REF	Σ
BORDETELLA Supplement	81013	10 bottles

One bottle is sufficient to prepare 500 ml of medium

TABLE OF SYMBOLS

IVD In Vitro Diagnostic Medical Device	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	LOT Batch code



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Lot 6 / POA 1-2

Instructions For Use
ENGLISH

Chromatic™ Candida

Chromogenic selective medium for the isolation and differentiation of *Candida* spp directly from clinical and nonclinical specimens.



DESCRIPTION

Chromatic™ Candida is a chromogenic selective medium used for the isolation and differentiation of *Candida* species directly from clinical and nonclinical specimens permitting to distinguish among *C.albicans*, *C.tropicalis*, *C.krusei*, *C.glabrata*, *C.dubliniensis* and *C.parapsilosis*.

Although *Candida albicans* remains the most common cause of human Candidiasis, the frequency of infection attributed to other members of the genus is also increasing. Effective treatment requires both early diagnosis and prompt initiation of therapy against fungal infection.

TYPICAL FORMULA

	(g/l)
Peptone	10.0
Chloramphenicol	0.5
Chromogenic Mix	25.2
Agar	15.0
Final pH 6.1 ± 0.2 at 25°C	

METHOD PRINCIPLE

Peptone provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Chloramphenicol is the selective agent inhibiting most of the bacteria. Chromogenic mix allows to identify the *Candida* genus on the basis of the color and morphology of the colonies. Agar is the solidifying agent.

PREPARATION

Dehydrated medium
Suspend 50.7 g of the powder in 1 liter of distilled or deionized water. Mix well. Heat to boil shaking frequently until completely dissolved. **DO NOT AUTOCLAVE**.

Medium in bottles
Melt the content of the bottle in a water bath at 100°C (loosing the cap partially removed) until completely dissolved. Then screw the cap and check the homogeneity of the dissolved medium, if it is the case turning the bottle upside down. Cool at 45-50°C, mix well avoiding foam formation and aseptically distribute into Petri dishes.

TEST PROCEDURE

Inoculate the medium by direct streaking, spread plating or membrane filtration method. Incubate aerobically at 30-37°C for 24-48 hours.

INTERPRETING RESULTS

After incubation observe the color and the morphology of the colonies and interpret the results as indicated in the ID table.

ID Table.

Microorganism	Typical colony color
<i>Candida albicans</i>	Green
<i>Candida dubliniensis</i>	Yellow-green
<i>Candida glabrata</i>	Beige
<i>Candida krusei</i>	Pink, pale edges
<i>Candida parapsilosis</i>	Pale pink-white
<i>Candida tropicalis</i>	Blue

See pictures in Appendix I.

APPEARANCE

Dehydrated medium: free-flowing, homogeneous, light beige.
Prepared medium: slightly opalescent, very light beige.

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed. Store bottles and prepared plates at 2-8°C away from light. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

Dehydrated medium: 4 years.
Medium in bottles: 1 year.
Ready-to-use plates: 6 months.

QUALITY CONTROL

Plates are inoculated with the microbial strains indicated in the QC table.
Inoculum for productivity: 50-100 CFU
Inoculum for selectivity: 10⁴-10⁶ CFU.
Incubation conditions: aerobically at 35 ± 2°C for 24-48 hours.

QC Table.

Microorganism	ATCC®	Growth	Specification
<i>Candida albicans</i>	ATCC® 10231	Good	Green colonies
<i>Candida krusei</i>	ATCC® 14243	Good	Pink colonies
<i>Candida parapsilosis</i>	ATCC® 22019	Good	Pale pink-white colonies
<i>Candida tropicalis</i>	ATCC® 750	Good	Blue colonies
<i>Escherichia coli</i>	ATCC® 25922	Inhibited	—
<i>Staphylococcus aureus</i>	ATCC® 25923	Inhibited	—

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for *in vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

BIBLIOGRAPHY

1. Odds, F.C. And Bernaerts. 1994. CHROMAGAR-Candida, a new differential medium for presumptive identification of clinically important *Candida* species. J. Clin. Microbiol. 32: 1923-1929.
2. Wingard, JR. Importance of *Candida* species other than *C. albicans* as pathogens in oncology patients. Clin Infect Dis. 1995; 20: 115-25.
3. Pfaller, Huston and Cofman. 1996. J. Clin. Microbiol. 32: 1923-1929.
4. Maertens JA. History of the development of azole derivatives. J Clin Microbiol Infect. 2004; 10: 1-10.

PRESENTATION

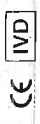
Chromatic™ Candida	Contents	Ref.
Chromatic™ Candida	90 mm ready-to-use plates	11612
Chromatic™ Candida	60 mm ready-to-use plates	163692
Chromatic™ Candida	Bottles	481110
Chromatic™ Candida	Dehydrated medium	610613
Chromatic™ Candida	Dehydrated medium	620613

TABLE OF SYMBOLS

LOT Batch code	IVD In vitro Diagnostic Medical Device		Manufacturer		Use by		Fragile, handle with care
REF Catalogue number			Contains sufficient for 400 tests		Caution, consult Instruction For Use		Do not reuse

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dot 9 6071



Fraser Broth Base

Enrichment medium for detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. according to ISO 11290 (both parts).

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Animal Tissues	5.0
Enzymatic Digest of Casein	5.0
Meat Extract	5.0
Yeast Extract	5.0
Sodium Chloride	20.0
Disodium Phosphate, anhydrous	9.6*
Potassium Dihydrogen Phosphate	1.35
Aesculin	1.0
Lithium Chloride	3.0

*Equivalent to 12.0 g of Disodium Hydrogen Phosphate, dihydrate.

DESCRIPTION

Fraser Broth Base is a liquid medium used with supplements for the selective enrichment of *L. monocytogenes* and *Listeria* spp from food, animal feeding and environmental samples in the area of food production and food handling.

This medium is completed after the addition of one of the following supplements:

- Half Fraser Supplement (ref. 81043)
- Fraser Supplement (ref. 81046)

Both supplements consist of a **Vial A** containing Acriflavine and Nalidixic acid and of a **Vial B** with Ammonium Iron(III) Citrate.

PRINCIPLE

Enzymatic digest of animal tissues, enzymatic digest of casein and meat extract provides nitrogen, vitamins, minerals and amino acids for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Sodium chloride maintains the osmotic balance of the medium and in a so high concentration inhibits enterococci. Potassium and sodium phosphates act as buffer system. Aesculin is hydrolyzed by all *Listeria* species to aesculetin. Lithium chloride is inhibitory for the accompanying flora.

Ferric ions provided by ammonium iron(III) citrate will react with aesculetin producing a blackening of the medium. Acriflavine and nalidixic acid are selective agents.

PREPARATION

Suspend 55 g of powder in 1 liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Sterilize at 121°C for 15 minutes. Cool up to 45-50°C. Aseptically, add rehydrated content of 2 vials A (10 ml) and of 2 vials B (10 ml) taken from the selected supplement.

TECHNIQUE

1. Add sample to Half Fraser Broth to prepare a 10-fold dilution (w/v or v/v).
Skip directly to step 3 for the enumeration method described in ISO 11290-2.
For the detection method in ISO 11290-1, incubate at 30 ± 1°C for 25 ± 1 h.
2. Transfer 0.1 ml of the primary enrichment culture into 10 ml of Fraser Broth.
Incubate at 37 ± 1°C for 24 ± 2 h.
3. From the enrichment cultures or from the initial suspension (depending on the method used) surface inoculate onto O.A. *Listeria* Agar (ref. 10620).
Incubate at 37 ± 1°C for 24 ± 2 h and for an additional 24 ± 2 h.
4. Following the procedure given by ISO 11290-1, use the selective enrichments to inoculate a second selective medium, e.g. *Listeria* Palcam Agar (ref. 10041), *Listeria* Oxford Agar (ref. 610157). Refer to the relevant technical sheet for further details.

INTERPRETATION OF RESULTS

A blackening of Half Fraser Broth and Fraser Broth can be observed after incubation.

Blue-green colonies with or without halo on O.A. *Listeria* Agar are considered presumptive *Listeria* spp. Typical colonies of *L. monocytogenes* are surrounded by an opaque halo. For the enumeration method count all colonies presumed to be *L. monocytogenes* and/or *Listeria* spp.

For confirmation, subculture onto appropriate non-selective agar, e.g. Blood Agar, Nutrient Agar, TSYEA (ref. 10432). Then, carry out confirmation tests including a positive and negative control.

STORAGE CONDITIONS

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container, lightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.



DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

1. ISO 11290-1:2017. Microbiology of the food chain - Horizontal method for the detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. - Part 1: Detection Method.
2. ISO 11290-2:2017. Microbiology of the food chain - Horizontal method for the detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. - Part 2: Enumeration Method.
3. EN ISO 11135:2014. Microbiology of food; animal feed and water - Preparation, production, storage and performance testing of culture media
4. Rapporto ISTISAN 96/35. ISSN 1123-3117. Metodi di analisi per il controllo microbiologico degli alimenti.
5. Normalisation Praticase, ARVOR (1995) V06-53.
6. Fraser, J.A and Sperber W.H (1989) J. Food Prot., 51, 762-765.



PRODUCT SPECIFICATIONS

NAME
Fraser Broth Base

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

Ref.	Content	Packaging
610375	500 g	500 g of powder in plastic bottle
620375	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
7.2 ± 0.2

USE
Fraser Broth Base is a liquid medium used with supplements for the enrichment and enumeration of *L. monocytogenes* and *Listeria* spp in food and environmental samples, according to ISO 11290-1 and ISO 11290-2

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Powder medium
Appearance: free-flowing, homogeneous
Colour: beige
Ready-to-use medium
Appearance: clear
Colour: amber

SHELF LIFE
4 years

- QUALITY CONTROL**
- Control of general characteristics, label and print
 - Microbiological control
Supplement: Half Fraser Supplement
Incubation Conditions: 30 ± 1°C / 25 ± 1 h
Inoculum for productivity: ≤100 CFU

Microorganism	Specification
<i>Listeria monocytogenes</i> serovar 4b	WDCM 00021
+ <i>Escherichia coli</i>	WDCM 00013
+ <i>Enterococcus faecalis</i>	WDCM 00009

Blackening of the medium,
>10 colonies on O.A. Listeria Agar

Inoculum for selectivity: >10³ CFU

Microorganism	Specification
<i>Escherichia coli</i>	WDCM 00013
<i>Enterococcus faecalis</i>	WDCM 00009

Total inhibition on TSA
<100 colonies on TSA

TSA: Tryptic Soy Agar

TABLE OF SYMBOLS

LOT Batch code	Keep away from Sunlight	Manufacturer	Use by	Fragile, handle with care
REF Catalogue number	Temperature limitation	Contains sufficient for <n> tests	Caution, consult instructions for use	Do not reuse



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Lot 9 p 2

Fraser Supplement

ENGLISH

Selective enrichment supplement for detection of *Listeria monocytogenes* and *Listeria* spp. according to ISO 11290-1.

DESCRIPTION

Fraser Supplement consists of two distinct lyophilized supplements used for the preparation of Fraser Broth Base (ref. 610375, 620375). The complete medium is used for the selective enrichment and presumptive identification of *Listeria* spp from food and environmental samples.

KIT CONTENTS

Each kit contains:

- 10 vials of freeze-dried Fraser Supplement A
- 10 vials of freeze-dried Fraser Supplement B
- 1 instructions sheet

PRINCIPLE OF THE METHOD

Acriflavine and nalidixic acid inhibit the growth of the accompanying microbial flora. Ammonium ferric citrate allows the detection of aesculin hydrolysis by *Listeria* spp. A blackening of the medium is the result of that reaction.

COMPOSITION

		Content / vial	Content / liter of medium
Vial A	Acriflavine	12.5 mg	25 mg
	Nalidixic Acid	10 mg	20 mg
Vial B	Ammonium Iron(III) Citrate	0.25 g	0.5 mg

PROCEDURE FOR USE

1. Reconstitute aseptically the content of one vial of Supplement A and one vial of Supplement B, with 5 ml of sterile distilled water each.
2. Mix to complete dissolution and add aseptically to 500 ml of Fraser Broth Base. Autoclave and cool the medium at 45-50°C before the addition of supplements.
3. Mix with care and pour into final containers.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical sheet of the medium being prepared.

QUALITY CONTROL

1. Visual inspection: both supplements appear as whitish button, limpid solutions once reconstituted.
2. Microbiological control.
Prepare the medium per label directions. Inoculate with the microbial strains indicated below and incubate at $30 \pm 1^\circ\text{C}$ for 24 ± 2 h.

Control strains		Growth	Blackening
<i>Listeria monocytogenes</i> serovar 4b	WDCM 00021	Good	+
<i>Escherichia coli</i>	WDCM 00013	Inhibited	-
<i>Enterococcus faecalis</i>	WDCM 00009	Partially inhibited	-

WARNING AND PRECAUTIONS

Fraser Supplement contains substances classified as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use. The product is intended for professional use only and must be used by properly trained operators.

STORAGE AND TRANSPORT CONDITIONS

2-8°C away from light, until the expiry date on the label. However, our stability studies have shown that the storage or transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, do not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

REFERENCES

- ISO 11290-1:2017. Microbiology of the food chain – Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. – Part 1: Detection Method.
- ISO 11290-2:2017. Microbiology of the food chain – Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. – Part 2: Enumeration Method.
- EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
- Rapporto ISTISAN 96/35. ISSN 1123-3117. Metodi di analisi per il controllo microbiologico degli alimenti.
- Normalisation Francaise, AFNOR (1993) V08-55.
- Fraser. J.A and Sperber W.H (1988) J. Food Prot , 51, 762-765.

PRESENTATION

Product	Ref.	Content
Fraser Supplement	81046	20 vials

One vial of Supplement A and one vial of Supplement B are sufficient to prepare 500 ml of medium.

TABLE OF SYMBOLS

LOT Batch code	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	



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Rev.1 / 23.11.2018



Lot 9 p3

Half Fraser Supplement

ENGLISH

Selective supplement for detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. according to ISO 11290 (Part 1 and Part 2).

DESCRIPTION

Half Fraser Supplement consists of two distinct lyophilized supplements used for the preparation of Fraser Broth Base (ref. 610375, 620375). The complete medium is used for the selective enrichment and presumptive identification of *Listeria* spp from food and environmental samples.

KIT CONTENTS

Each kit contains:

- 10 vials of freeze-dried Half Fraser Supplement A
- 10 vials of freeze-dried Half Fraser Supplement B
- 1 instructions sheet

PRINCIPLE OF THE METHOD

Acriflavine and nalidixic acid inhibit the growth of the accompanying microbial flora. Ammonium ferric citrate allows the detection of aesculin hydrolysis by *Listeria* spp. A blackening of the medium is the result of that reaction.

COMPOSITION

		Content / vial	Content / liter of medium
Vial A	Acriflavine	6.25 mg	12.5 mg
	Nalidixic Acid	5 mg	10 mg
Vial B	Ammonium Ferric Citrate	0.25 g	0.5 mg

PROCEDURE FOR USE

1. Reconstitute aseptically the content of one vial of Supplement A and one vial of Supplement B, with 5 ml of sterile distilled water each.
2. Mix to complete dissolution and add aseptically to 500 ml of Fraser Broth Base. Autoclave and cool the medium at 45-50°C before the addition of supplements.
3. Mix with care and pour into final containers.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical sheet of the medium being prepared.

QUALITY CONTROL

1. Visual inspection: both supplements appear as whitish button, limpid solutions once reconstituted.
2. Microbiological control.
Prepare the medium per label directions. Inoculate with the microbial strains indicated below and incubate at 30 ± 1°C for 25 ± 1 h.

Control strains		Growth	Blackening
<i>Listeria monocytogenes</i> serovar 4b	WDCM 00021	Good	+
<i>Escherichia coli</i>	WDCM 00013	Inhibited	-
<i>Enterococcus faecalis</i>	WDCM 00009	Partially inhibited	-

WARNING AND PRECAUTIONS

Half Fraser Supplement contains substances classified as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use. The product is intended for professional use only and must be used by properly trained operators.

STORAGE AND TRANSPORT CONDITIONS

2-8°C away from light, until the expiry date on the label. However, our stability studies have shown that the storage or transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, do not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

REFERENCES

- ISO 11290-1:2017. Microbiology of the food chain – Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. – Part 1: Detection Method.
- ISO 11290-2:2017. Microbiology of the food chain – Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. – Part 2: Enumeration Method.
- EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
- Rapporto ISTISAN 96/35. ISSN 1123-3117. Metodi di analisi per il controllo microbiologico degli alimenti.
- Normalisation Francaise, AFNOR (1993) V08-55.
- Fraser. J.A and Sperber W.H (1988) J. Food Prot , 51, 762-765.

PRESENTATION

Product	Ref.	Content
Half Fraser Supplement	81043	20 vials

One vial of Supplement A and one vial of Supplement B are sufficient to prepare 500 ml of medium.

TABLE OF SYMBOLS

LOT Batch code	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	



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Rev.1 / 23.11.2018



LISTERIA PALCAM AGAR

Selective medium for the isolation and enumeration of *Listeria monocytogenes* according to ISO 11290-1.

TYPICAL FORMULA (g/l)

Peptone	23.0
Starch	1.0
Sodium Chloride	5.0
Yeast Extract	3.0
Glucose	0.5
Mannitol	10.0
Esculin	0.8
Ferri Ammonium Citrate	0.5
Lithium Chloride	18.0
Phenol Red	0.08
Agar	12.0

Final pH = 7.2 ± 0.2 at 25 °C.

DESCRIPTION

The complete LISTERIA PALCAM AGAR, prepared by adding Listeria Palcam supplement to the medium base, is a selective and differential medium, formulated by Van Notten and other, and according to ISO 11290, for isolation and enumeration of *Listeria monocytogenes* from foods.

The medium is also recommended by:

1. AFNOR for the research of *L. monocytogenes* in foods.
2. IDF as an additional plating medium for the detection of *Listeria* spp in milk and milk products.
3. Health Canada for the detection of *L. monocytogenes* in food and environmental samples.

PRINCIPLE

The peptones favour the excellent growth of *Listeria*, glucose and starch are energy sources, esculin is hydrolysed by *Listeria* strains to glucose and esculetin, the latter compound forming a black complex with ferric ions. The complexive ions is inhibited by lithium chloride and by the antimicrobial selective supplement: cefazidim, polymyxin B, acriflavine. The fermentation of mannitol by contaminating bacteria that may grow causes phenol red to turn yellow.

PREPARATION

Suspend 35.4 g of powder in 500 ml of distilled or deionized water. Heat until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically add 1 vial of Listeria Palcam Supplement (code 81026). Mix well. Dispense into Petri dishes.

TECHNIQUE

Streak a loopful of the suitable enriched broth, inoculated with the sample to analyze, onto the surface of the medium. Incubate at 36-41°C for 24-48 hours.

INTERPRETATION OF RESULTS

Listeria monocytogenes cultivates with grey-green colonies surrounded by a black zone (esculetin hydrolysis) with medium's turning to red for missed mannitol fermentation. Possible contaminants should be detected by poor or no ferment mannitol and cultivate with yellow colonies surrounded by a yellow zone. Suspended colonies must be submitted to Gram coloring, catalase test, mobility examination and identification biochemical tests (Listeria System 18RT cod. 71648).

STORAGE

The powder is very hygroscopic; store the powder at 10-30 °C in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared media at 2-8 °C.

WARNING AND PRECAUTIONS

The product is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use. The product is designed for *in vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

1. ISO 11290-1/2 Microbiology of food and animal feeding stuffs- Horizontal method for the detection and enumeration of *Listeria monocytogenes*; Part 1 Detection method - Part 2: enumeration method
2. Normalisation Française, AFNOR (1993) V08-55.
3. Manuel suisse des denrées alimentaires, Chapitre 56, E21, juillet 2000.
4. Rapporto ISTITAN 96/95 Istituto Superiore di Sanità, ISSN 1123- 3117
5. Van Notten, P. et al. (1989) Int. J. Food Microbiol. 6, 299-316.

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PRODUCTION SPECIFICATIONS

NAME

LISTERIA PALCAM AGAR

PRESENTATION

Dehydrated culture medium.

STORAGE

10-30°C.

PACKAGING

Code

Content

510168 500 g

E20168 100 g

500 g of powder in plastic bottle

100 g of powder in plastic bottle

PH OF THE MEDIUM

7.2 ± 0.2

USE

The complete LISTERIA PALCAM AGAR, prepared by adding Listeria Palcam supplement to the medium base, is a selective and differential medium, formulated by Van Notten and other, and according to ISO 11290, for isolation and enumeration of *Listeria monocytogenes* from foods.

TECHNIQUE

Refer to technical sheet of the product.

APPEARANCE OF THE MEDIUM

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: pink.

Prepared medium

Appearance: slightly opalescent.

Color: red.

SHELF LIFE

4 years.

QUALITY CONTROL

1. Control of general characteristics, label and print
 2. Sterility control
7 days at 25 ± 1°C, in aerobiosis
7 days at 36 ± 1°C, in aerobiosis
- Microbiological control
Inoculum for productivity: 10-100 UFC/ml
Inoculum for selectivity: 10⁶-10⁸ UFC/ml
Inoculum for specificity: ≤ 10⁶ UFC/ml
Incubation conditions: 37 ± 1°C for 24-48 hours.

Microorganism	ATCC	Growth	Characteristics
<i>Listeria monocytogenes</i>	19111	good	Gray colonies black halo
<i>Listeria monocytogenes</i>	13832	good	Gray colonies black halo
<i>Escherichia coli</i>	25922	inhibited	
<i>Enterococcus faecalis</i>	29212	inhibited	
<i>Candida albicans</i>	10231	inhibited	

TABLE OF SYMBOLS

LOT	Batch code	Temperature limitation	Manufacturer	Contains sufficient for <v> tests	IVD	<i>In vitro</i> Diagnostic Medical Device
REF	Catalogue number	Keep away from heat	Use by	Caution, consult accompanying documents		





Lot 10 no 2

ENGLISH

LISTERIA PALCAM Supplement

Selective supplement for the isolation of *Listeria monocytogenes*.

DESCRIPTION

LISTERIA PALCAM Supplement is a selective supplement made of a freeze-dried mixture of Polymyxin B, Ceftazidime and Acriflavine to use as supplement of the culture medium LISTERIA PALCAM AGAR code 610168 or 620168 for the isolation of *Listeria monocytogenes*.

KIT CONTENTS

Each kit contains:

- 10 vials of freeze-dried LISTERIA PALCAM Supplement
- 1 instructions sheet

PRINCIPLE OF THE METHOD

Polymyxin B, Ceftazidime and Acriflavine contribute to the finale medium selectivity by inhibiting the growth of most of common bacterial species non-*Listeria spp* frequently found in food. Polymyxin B acts against Gram-negative bacteria, Ceftazidime is active against Gram-positive and enterobacteria, Acriflavine inhibits many Gram-positive bacteria.

COMPOSITION

LISTERIA PALCAM Supplement		
	Content / vial	Content / l of medium
Polymyxin B	5.0 mg	10.0 mg
Ceftazidime	10.0 mg	20.0 mg
Acriflavina HCl	2.5 mg	5.0 mg

PROCEDURE FOR USE

1. Reconstitute aseptically the content of one vial of LISTERIA PALCAM Supplement with 5 ml of sterile distilled water. Shake until completely dissolved, avoiding foam formation.
2. Add aseptically the entire content of one vial (5 ml) to 500 ml of medium LISTERIA PALCAM AGAR code 610168 or 620168 autoclaved and cooled at 45-50°C.
3. Mix with care.
4. Distribute into Petri dishes.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical documentation for LISTERIA PALCAM AGAR code 610168 or 620168.

QUALITY CONTROL

1. Control of the appearance: freeze-dried product, yellow colour .
2. Microbiological control.

Prepare the plates using as base the medium LISTERIA PALCAM AGAR code 610168 or 620168 added with LISTERIA PALCAM Supplement (1 vial in 500 ml of medium). The plates are seeded with the strains indicated in the microbiological control table.

Incubation condition: 24-48 h at 36 ± 1 °C.

Microbiological control:

	Control strains	Growth
<i>Listeria monocytogenes</i>	ATCC 19111	Good
<i>Listeria monocytogenes</i>	ATCC 13932	Good
<i>Escherichia coli</i>	ATCC 25922	Inhibited
<i>Enterococcus faecalis</i>	ATCC 29212	Inhibited

PRECAUTIONS

The product LISTERIA PALCAM Supplement is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use.

LISTERIA PALCAM Supplement is a selective supplement to be used only for *in vitro* diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

Store LISTERIA PALCAM Supplement at 2-8 °C in its original packaging. In such conditions LISTERIA PALCAM Supplement will remain valid until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration.

REFERENCES

- Van Netten, P. et al.,(1989). J. of Food Microbiol. 8:299-317.
- AFNOR. (1993). Food Microbiology – "Detection of *Listeria monocytogenes*". IDF Provisional International Standard n° 143. International Dairy Federation, Brussels.

PRESENTATION

Product	REF	Σ
LISTERIA PALCAM Supplement	81026	10 vials

TABLE OF SYMBOLS

IVD In Vitro Diagnostic Medical Device	Do not reuse	Manufacturer	Σ Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	LOT Batch code



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Rev.0 / 23.10.2005

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dot 14 por 1



O.A. Listeria Agar
Chromogenic selective medium for detection and enumeration of *Listeria monocytogenes* and other *Listeria* spp. according to ISO 11290, Part 1 and Part 2.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Animal Tissues	18.0
Enzymatic Digest of Casein	6.0
Yeast Extract	10.0
Sodium Pyruvate	2.0
Glucose	2.0
Magnesium Glycero-phosphate	1.0
Magnesium Sulfate, anhydrous	0.5
Sodium Chloride	5.0
Lithium Chloride	10.0
Disodium Hydrogen Phosphate, anhydrous	2.5
5-Bromo-4-Chloro-3-Indolyl- β -D-Glucopyranoside	0.05
Agar	15.0
Final pH 7.2 \pm 0.2 at 25°C	

DESCRIPTION
O.A. Listeria Agar is a chromogenic medium used with supplements for the selective isolation, differentiation and enumeration of *Listeria monocytogenes* and *Listeria* spp from food, animal feed, environmental samples, and other materials in areas of food production and food handling.
With the addition of O.A. Listeria Supplement (ref. 81074) the medium complies with the formulation of Ottaviani and Agosti recommended in ISO 11290-1, ISO 11290-2, FDA-BAM and APHA.

PRINCIPLE
Enzymatic digest of animal tissues and enzymatic digest of casein provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Sodium pyruvate and glucose are sources of energy. Phosphates act as buffer. Magnesium sulfate provides divalent cations and sulfate. Lithium chloride is a selective agent. 5-bromo-4-chloro-3-indolyl- β -D-glucopyranoside is the chromogenic substrate for the detection of the β -glucosidase enzyme. Agar is the solidifying agent.
O.A. Listeria Supplement consists of an Enrichment Supplement and a Selective Supplement. They are incorporated in the medium to detect the phosphatase activity and confer further selectivity, respectively. The substrate phosphatidylinositol and the following antimicrobial agents are added: Nalidixic acid, Cefazidime, Cycloheximide and Polymyxin B.

PREPARATION
Suspend 72 g of powder in 1 liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Sterilize at 121°C for 15 minutes. Cool up to 45-50°C. Aseptically, add the entire content of 2 bottles (40 ml) of O.A. Listeria Enrichment Supplement and rehydrated content of 2 vials (10 ml) of O.A. Listeria Selective Supplement. Mix well and pour in Petri dishes.
NOTE: To reconstitute the selective supplement use an equal part mixture of distilled water and ethanol.

TECHNIQUE
Deduction method according to ISO 11290-1
Demi Fraser Broth (ref. 414000) and Fraser Broth (ref. 24131) are used for the primary and secondary enrichments, respectively.
Inoculate the surface of O.A. Listeria Agar from both enriched cultures to obtain well-isolated colonies.
Enumeration method according to ISO 11290-2
Use an appropriate diluent, e.g. Buffered Peptone Water (ref. 414030), Demi Fraser Broth (ref. 424010), to prepare an 1 to 9 dilution of the test sample. Inoculate the surface of the medium directly with the initial suspension to obtain well-isolated colonies.
Incubate at 37 \pm 1°C for 24 \pm 2 h and for an additional 24 \pm 2 h.

INTERPRETATION OF RESULTS
L. monocytogenes produce typical blue-green colonies surrounded by an opaque halo. Blue-green colonies with or without halo are considered presumptive *Listeria* spp.
For the enumeration method count all colonies presumed to be *L. monocytogenes* and/or *Listeria* spp.
For confirmation, subculture onto appropriate non-selective agar, e.g. Blood Agar, Nutrient Agar, TSYEA (ref. 10432). Then, carry out confirmation tests including a positive and negative control.

STORAGE
The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS
The product contains hazardous substances and is classified as dangerous. It is recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.



DISPOSAL OF WASTE
Disposal of waste must be carried out according to the national and local regulations in force.

- REFERENCES**
- ISO 11290-1:2017 Microbiology of the food chain – Horizontal method for the detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. – Part 1: Detection Method.
 - ISO 11290-2:2017 Microbiology of the food chain – Horizontal method for the detection and enumeration of *Listeria monocytogenes* and *Listeria* spp. – Part 2: Enumeration Method.
 - BAM: Detection and Enumeration of *Listeria monocytogenes* (2017) Bacteriological Analytical Manual, Chapter 10: Detection of *Listeria monocytogenes* in Foods and Environmental Samples, and Enumeration of *Listeria monocytogenes* in Foods - U.S. Food and Drug Administration.
 - APHA (2015): Compendium of Methods for the Microbiological Examination of Foods, 8th ed. American Public Health Association, Washington, D.C.
 - EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
 - Savini V, et al. (2014) Liofilchem® O.A. Listeria agar and direct CAMP test provided sooner *Listeria monocytogenes* identification from neonatal bacteremia. Int J Clin Exp Pathol. 3:1172-1175.
 - Ottaviani, E., Ottaviani, M. and Agosti, M. (1997): Differential agar medium for *Listeria monocytogenes*. Ind. Aliment. 36: 888.



PRODUCT SPECIFICATIONS

NAME O.A. Listeria Agar		
PRESENTATION Dehydrated medium		
STORAGE 10-30 °C		
PACKAGING		
Ref.	Content	Packaging
610607	500 g	500 g of powder in plastic bottle
620607	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
7.2 ± 0.2

USE
O.A. Listeria Agar is a medium used with supplements for the selective isolation, differentiation and enumeration of *Listeria* spp from food and environmental samples, according to ISO 11290-1 and ISO 11290-2

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Powder medium
Appearance: free-flowing, homogeneous
Colour: whitish beige
Ready-to-use medium
Appearance: slightly opalescent
Colour: amber

SHELF LIFE
4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 50-100 CFU
Inoculum for selectivity: 10⁶-10⁸ CFU
Inoculum for specificity: 10⁶-10⁸ CFU
Incubation Conditions: 48 ± 4 h / 37 ± 1 °C

Microorganism	Growth	Specification
<i>Listeria monocytogenes</i> 4b	Good	Blue green colonies with opaque halo
<i>Escherichia coli</i>	Inhibited	—
<i>Enterococcus faecalis</i>	Inhibited	—
<i>Listeria innocua</i>	Good	Blue green colonies without opaque halo

TABLE OF SYMBOLS

LOT	Batch code		Keep away from Sunlight		Manufacturer		Use by		Fragile, handle with care
REF	Catalogue number		Temperature limitation		Contains sufficient for 4P tests		Caution, consult instructions for use		Do not reuse



O.A. LISTERIA Supplement

Supplement for selective enrichment of *Listeria monocytogenes*.

Lot 11
n° 2-3

ENGLISH

DESCRIPTION

O.A. LISTERIA Supplement is constituted by 4 bottles of enrichment supplement, containing L- α -fosphatidylinositol, and 4 vials of freeze-dried selective supplement, containing Nalidixic Acid, Cefazidime, Cycloheximide and Polymyxin B, to use for the preparation of the medium O.A. LISTERIA AGAR (ref. 610601) for the detection of *L. monocytogenes*.

KIT CONTENTS

Each kit contains:

- 4 bottles (20 mL) of O.A. LISTERIA ENRICHMENT Supplement
- 4 vials of freeze-dried O.A. LISTERIA SELECTIVE Supplement
- 1 Instruction sheet.

PRINCIPLE OF THE METHOD

The selectivity of the medium is due to the addition of antimicrobial selective mixture containing ceftazidime, polymyxin B, nalidixic acid and cycloheximide. The specific differential activity is obtained by means a substrate (L- α -fosphatidylinositol) for a phospholipase C enzyme that is present in *Listeria monocytogenes*.

COMPOSITION

O.A. LISTERIA ENRICHMENT Supplement	
Content / bottle	
L- α - fosphatidylinositol	1.0 g
O.A. LISTERIA SELECTIVE Supplement	
Content / vial	
Nalidixic Acid	10.0 mg
Ceftazidime	10.0 mg
Cycloheximide	25.0 mg
Polymyxin B	38350 IU

PROCEDURE FOR USE

1. Aseptically add the content of 1 bottle of O.A. LISTERIA ENRICHMENT Supplement, prewarmed at 48-50°C, and of 1 vial of O.A. LISTERIA SELECTIVE Supplement, reconstituted with 5 mL of a 1:1 mix of ethanol and sterile distilled water, to 500 mL of medium O.A. LISTERIA AGAR (ref. 610601), autoclaved and cooled to 48-50°C.
2. Mix with care.
3. Distribute into the final containers.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical documentation for O.A. LISTERIA AGAR (ref. 610601).

QUALITY CONTROL

Microbiological control.

Prepare the O.A. LISTERIA AGAR (ref. 610601) and inoculate it with the strains indicated in the microbiological control table. Incubate at 36 \pm 1 °C for 24-48 hours.

Control strains		Growth	Characteristics
<i>Escherichia coli</i>	ATCC 11229	Inhibited	Blue-green colonies surrounded by an opaque halo
<i>Enterococcus faecalis</i>	ATCC 19433	Inhibited	
<i>Candida albicans</i>	ATCC 10231	Inhibited	Blue-green colonies surrounded by an opaque halo
<i>Listeria monocytogenes</i>	ATCC 35152	Good	
<i>Listeria monocytogenes</i>	ATCC 19111	Good	Blue-green colonies
<i>Listeria innocua</i>	ATCC 33090	Good	

PRECAUTIONS

The kit contains products with dangerous substance according to directives 1999/45/CE and 2001/60/CE for which exist recognized exposure limits. For its correct use consult the safety data sheet.

STORAGE

Store O.A. LISTERIA Supplement at 2-8 °C in its original packaging. In such conditions O.A. LISTERIA Supplement maintains its validity until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration.

REFERENCES

- Artault, S., Bind, J.L., Delaval, Y., Dureuil, N., Gillard, N., (2000) AFNOR Validation of the ALOA method for the detection of *Listeria monocytogenes* in foodstuffs. Colloque de la Societè Francaise de Microbiologie, Paris 19-20 Octobre, 2000.
- ISO 11290 1/2 (Draft, May 2002) Microbiology of food and animal feeding stuffs – Horizontal method for detection and enumeration of *Listeria monocytogenes*.
- Ottaviani, F., Ottaviani, M., Agosti, M., (1997) Esperienze su un agar selettivo e differenziale per *Listeria monocytogenes*. Industrie alimentari, XXXVI, luglio-agosto, 888.

PRESENTATION

product		REF	Σ
O.A. LISTERIA Supplement		81074	4+4 bottles

TABLE OF SYMBOLS

LOT Batch code	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Very toxic	Use by	Caution, consult accompanying documents



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Rev. 1/23.03.2010

Lot 12 p 87



TOS Propionate Agar Base

Basal medium for detection of bifidobacteria in milk products according to ISO 29981.

TYPICAL FORMULA	(g/l)
Casein Peptone	10.0
Yeast Extract	1.0
Galactooligosaccharide TOS	10.0
Dipicassium Phosphate	4.8
Monopotassium Phosphate	3.0
Magnesium Sulfate, heptahydrated	0.2
Ammonium Sulfate	3.0
L-Cysteine HCl	-0.5
Sodium Propionate	15.0
Agar	15.0

Final pH 6.7 ± 0.2 at 25°C

DESCRIPTION
TOS Propionate Agar Base is a selective medium used with supplements for the enumeration of bifidobacteria in milk products including fermented and non-fermented milks, milk powders and infant formulae.
This medium complies with the specification given by ISO 29981/IDF 220.

PRINCIPLE
Casein peptone provides the nitrogen, vitamins, minerals and amino acids for bacterial growth. Yeast extract is a source of vitamins, particularly of B-group. Galactooligosaccharide TOS is a growth factor specific for bifidobacteria. Phosphates act as buffer. Magnesium sulfate allows the recovery of pre-injured bifidobacteria. Ammonium sulfate serves as nitrogen source. L-cysteine is a reducing agent. Sodium Propionate is the selective agent inhibiting the accompanying flora. Agar is the solidifying agent.
Supplementation with Lithium-Mupirocin (MUP), contained in MUP Selective Supplement (ref. 81101), confers further selectivity against lactobacilli, lactococci, streptococci and leuconostocs. Mupirocin is so highly selective that in most cases only bifidobacteria grow with visible colonies with no need for confirmation.

PREPARATION
Suspended 62.5 g of powder in 1 liter of distilled or deionized water. Heat to boiling to dissolve completely. DO NOT OVERHEAT. Sterilize by autoclaving at 115 ± 3°C for 15 minutes. Cool the medium to 45-50°C before adding the rehydrated content of 2 vials (10 ml) of MUP Selective Supplement.

TECHNIQUE
Use 1/4 strength Ringer's solution (ref. 81058) to prepare the initial sample suspension and further decimal dilutions. Inoculate the completed TOS-MUP medium by the pour-plate method or by spreading the sample over the agar surface. NOTE: Bifidobacteria are sensitive to oxygen from air, so lime from the first dilution to the agar inoculation should not exceed 15 minutes. Incubate anaerobically at 37°C for 72 ± 3 hours.

INTERPRETATION OF RESULTS
Observe colonies growth. Typically, bifidobacteria grow as white colonies of 1-4 mm diameter sizes. Count colonies on all plates containing 15-300 colonies. Report the count as CFU per ml of sample allowing for dilution factors.

STORAGE
The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.

WARNING AND PRECAUTIONS
The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE
Disposal of waste must be carried out according to national and local regulations in force.

- REFERENCES**
- ISO 29981/IDF 220: 2010. Milk products - Enumeration of presumptive bifidobacteria - Colony count technique at 37 degrees C.
 - Zitz, U., Kneifel, W., Weiss, H., Wirth, P.-Th. (2007) Selective Enumeration of Bifidobacteria in Dairy Products: Development of a Standard Method. Bulletin Int. Dairy Fed. 411: 5-20.
 - ISO 7888/IDF 117:2003. Yogurt - Enumeration of characteristic microorganisms - Colony-count technique at 37 degrees C.



PRODUCT SPECIFICATIONS

NAME
TOS Propionate Agar Base

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

PACKAGE

Ref.	Content	Packaging
610378	500 g	500 g of powder in plastic bottle
620278	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
6.7 ± 0.2

USE
TOS Propionate Agar Base is a base medium used with supplement for the selective growth of bifidobacteria from milk products

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Dehydrated medium
Appearance: free-flowing, homogeneous
Colour: beige
Prepared medium
Appearance: clear
Colour: amber

SHELF LIFE
4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 50-100 CFU
Inoculum for selectivity: 10⁷-10⁸ CFU
Incubation conditions: 72 ± 3 h at 37 ± 1°C under anaerobic atmosphere

Microorganism

Microorganism	ATCC®	ATCC®	ATCC®	Growth	Colony Colour
<i>Bifidobacterium animalis</i> subsp. <i>animalis</i>	ATCC® 25527	ATCC® 27536	ATCC® 3393	Good	White
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i>				Good	White
<i>Lactobacillus casei</i>				Inhibited	—

TABLE OF SYMBOLS

LOT	Batch code	Keep away from heat sources	Manufacturer	Use by	Fragile, handle with care
REF	Catalogue number	Temperature limitation	Contains sufficient for 47- tests	Consult instructions for use	



Lot 12 pot 2

ENGLISH

MUP Selective Supplement

Selective supplement for detection of bifidobacteria in milk products.

DESCRIPTION

MUP Selective Supplement is a selective lyophilized supplement used for the preparation of TOS Propionate Agar Base (ref. 610378, 620378). The complete medium is used for the enumeration of bifidobacteria in milk and milk products.

KIT CONTENTS

Each kit contains:

- 10 vials of lyophilized MUP Selective Supplement
- 1 instruction sheet.

PRINCIPLE OF THE METHOD

Lithium-Mupirocin (MUP) inhibits lactic acid bacteria without influencing the growth of bifidobacteria.

COMPOSITION

	Content / vial	Content / liter of medium
Lithium-Mupirocin	25 mg	0.05 g

PROCEDURE FOR USE

1. Reconstitute aseptically the content of one vial of MUP Selective Supplement with 5 ml of sterile distilled water.
2. Mix to complete dissolution and add aseptically to 500 ml of TOS Propionate Agar Base autoclaved and cooled to 45-50°C.
3. Mix with care and pour into Petri dishes.

NOTE: After adding the supplement the medium is used immediately.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical sheet of the medium being prepared.

QUALITY CONTROL

1. Visual inspection: whitish button, limpid colourless solution once reconstituted.
2. Microbiological control.

Prepare the medium per label directions. Inoculate the plates with the microbial strains indicated below and incubate at 37°C for 72 h under anaerobic atmosphere.

Control strains		Growth	Colony Colour
<i>Bifidobacteria animalis</i> subsp. <i>lactis</i>	ATCC® 27536	Good	White
<i>Lactobacillus casei</i>	ATCC® 393	Inhibited	---

PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for professional use only and must be used by properly trained operators.

STORAGE AND TRANSPORT CONDITIONS

2-8°C away from light, until the expiry date on the label. However, our stability studies have shown that the storage or transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, do not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

REFERENCES

- ISO 29981/IDF 220: 2010. Milk products - Enumeration of presumptive bifidobacteria - Colony count technique at 37 degrees C.
- Zitz, U., Kneifel, W., Weiss, H., Wilrich, P.-Th. (2007) Selective Enumeration of Bifidobacteria in Dairy Products: Development of a Standard Method. Bulletin Int. Dairy Fed. 411: 3-20.
- ISO 7889/IDF 117:2003. Yogurt - Enumeration of characteristic microorganisms - Colony-count technique at 37 degrees C.

PRESENTATION

Product	Ref.	Content
MUP Selective Supplement	81101	10 vials

One vial is sufficient to prepare 500 ml of medium.

TABLE OF SYMBOLS

LOT Batch code	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	



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Rev.0 / 07.08.2018

Lot 14 p.077



Pseudomonas Agar Base

Selective medium for detection and enumeration of *Pseudomonas* spp. according to ISO 13720, ISO/TS 11059 and ISO 16266.

TYPICAL FORMULA	(g/l)
Gelatin Peptone	16,0
Casain Hydrolysate	10,0
Potassium Sulfate, Anhydrous	10,0
Magnesium Chloride, Anhydrous	1,4
Agar	15,0
Final pH 7,1 ± 0,2 at 25°C	

DESCRIPTION

Pseudomonas Agar Base is a medium used with supplements for the selective isolation of *Pseudomonas* spp from meat and dairy products, water, environmental samples and clinical specimens.

When supplemented with CFC (*Pseudomonas*) Supplement (ref. 81049), the medium complies with the recommendations of ISO 13720 for the detection and enumeration of *Pseudomonas* spp in meat and meat products.

When supplemented with PP (*Pseudomonas*) Supplement (ref. 81093), the medium complies with the recommendations of ISO/TS 11059 for the isolation and enumeration of *Pseudomonas* spp in milk and milk products.

When supplemented with CN (*Pseudomonas*) Supplement (ref. 81009), the medium complies with the recommendations of ISO 16266 for the detection and enumeration of *Pseudomonas aeruginosa* in water samples by using the membrane filtration technique.

PRINCIPLE

Gelatin peptone and casain hydrolysate provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients for organisms growth. Potassium sulfate and magnesium chloride promote pyocyanin production. Agar is the solidifying agent.

Supplementation with Glycerol Supplement (ref. 80021) supplies a carbon and energy source enhancing pyocyanin production. CFC Supplement contains Cetrimide, Fusidic Acid and Cefaloridin.

PP Supplement contains Primaridin (Nalamydin) and Penicillin G. CN Supplement contains Cetrimide and Nalidixic Acid.

By use of the appropriate selective supplement and incubation conditions the medium becomes selective for *Pseudomonas* spp, including *Burkholderia cepacia* (CFC Agar and PP Agar), or *Pseudomonas aeruginosa* (CN Agar).

PREPARATION

Suspend 52,4 g of powder in 1 liter of deionized or distilled water. Add 10 ml of Glycerol Supplement. Bring to boil and shake until completely dissolved. Sterilize at 121°C for 15 minutes. Cool up to 45-50°C.

To prepare *Pseudomonas* CFC Agar, aseptically, add rehydrated content of 2 vials (4 ml) of CFC Supplement.

To prepare *Pseudomonas* PP Agar, aseptically, add rehydrated content of 2 vials (10 ml) of PP Supplement.

To prepare *Pseudomonas* CN Agar, aseptically, add rehydrated content of 2 vials (4 ml) of CN Supplement.

Mix well and pour in Petri dishes.

TECHNIQUE

Pseudomonas CFC Agar and *Pseudomonas* PP Agar
Inoculate the medium by using the spread plate technique. Incubate aerobically at 25 ± 1°C for up to 5 hours.

Pseudomonas CN Agar
Inoculate the medium by using the membrane filtration method. Incubate aerobically at 36 ± 2°C for 40-48 hours.

INTERPRETATION OF RESULTS

All colonies grown on either CFC Agar or PP Agar are suspect; *Pseudomonas* spp. Colonies which result non-glucose fermenters (ref. 88202) and oxidase positive (ref. 86028, 86003 or 86004) are confirmed as *Pseudomonas* spp.

Examine membranes on CN Agar for growth and fluorescence under UV light after 20-24 h and 40-48 h.

- Count all colonies that produce the green-blue pigment as confirmed *Pseudomonas aeruginosa*.
- Count all non-pyocyanin producing colonies that fluoresce as presumptive *Pseudomonas aeruginosa*. Confirm by using Acetamide Broth (ref. 24144).
- Count all other reddish-brown non-pigmented colonies that do not fluoresce as presumptive *Pseudomonas aeruginosa*. Confirm by using the oxidase test, Acetamide Broth and King's B Medium (ref. 11072).

STORAGE AND TRANSPORT CONDITIONS

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container, tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for *in vitro* diagnostic use only and must be used by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

- EN ISO 11133:2014, Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of ISO/TS 11059 media.
- ISO/TS 11059:2009 (IDF/IRM 225: 2009) Milk and milk products – Method for the enumeration of *Pseudomonas* spp.
- UNI EN ISO 16266:2008, Water quality – Detection and enumeration of *Pseudomonas aeruginosa* by membrane filtration.
- ISO 13720:1995, Meat and meat products – Enumeration of *Pseudomonas* spp.
- Mead, G.C. and B.W. Adams (1977) A selective medium for the rapid isolation of *Pseudomonas* associated with poultry meat spoilage. Br. Poult. Sci. 18:661-670
- Goto S. and S. Enomoto (1970) Nalidixic acid cetrimide agar. A new selective plating medium for the selective isolation of *P. aeruginosa*. Jpn. J. Microbiol. 14:65.





PRODUCT SPECIFICATIONS

NAME
 Pseudomonas Agar Base

PRESENTATION
 Dehydrated medium

STORAGE
 -10-30°C

PACKAGING	
Ref.	Packaging
610071	500 g of powder in plastic bottle
E20071	100 g of powder in plastic bottle

pH OF THE MEDIUM
 7,1 ± 0,2

USE
 Pseudomonas Agar Base is a medium used with supplements for the selective isolation of Pseudomonas spp from meat and dairy products, water, environmental samples, according to ISO 15720, ISO/TS 11059 and ISO 16226. This medium can be used also for the examination of clinical specimens

TECHNIQUE
 Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
 Powder medium
 Appearance: flowing, homogeneous
 Appearance: light beige
 Reconstituted medium
 Appearance: slightly opalescent
 Colour: amber

SHELF LIFE
 4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
 Incubation productivity: 50-100 CFU
 Incubation for sensitivity: 10⁷-10⁸ CFU
 Pseudomonas CFC Agar Incubation Conditions: 40-48 h at 25 ± 1°C, in aerobiosis

Microorganism	WDCM 00115	WDCM 00116	WDCM 00012
<i>Pseudomonas fluorescens</i>	Good	Good	Inhibited
<i>Pseudomonas fragi</i>	Good	Good	Inhibited
<i>Escherichia coli</i>	Good	Good	Inhibited

Microorganism	WDCM 00115	WDCM 00025	WDCM 00012
<i>Pseudomonas fluorescens</i>	Good	Good	Inhibited
<i>Pseudomonas aeruginosa</i>	Good	Good	Inhibited
<i>Escherichia coli</i>	Good	Good	Inhibited

Microorganism	WDCM 00024	WDCM 00087	WDCM 00013
<i>Pseudomonas fluorescens</i>	Good	Inhibited	Inhibited
<i>Enterococcus faecalis</i>	Good	Inhibited	Inhibited
<i>Escherichia coli</i>	Good	Inhibited	Inhibited

TABLE OF SYMBOLS

	Batch code		In vitro Diagnostic Medical Device		Manufacturer		Use by		Fragile, handle with care
	Catalogue number		Temperature limitation		Contains sufficient for <n> tests		Caution, consult instructions for use		Do not reuse





Lot 14 part 2

ENGLISH

CN (*Pseudomonas*) Supplement

Selective supplement for the isolation of *Pseudomonas aeruginosa*

DESCRIPTION

CN (*Pseudomonas*) Supplement is a selective supplement for the isolation of *Pseudomonas aeruginosa*, comprising a freeze-dried mixture of Cetrimide and Nalidixic Acid. CN (*Pseudomonas*) Supplement is used for selective enrichment of PSEUDOMONAS AGAR BASE medium code 610071 or 620071.

KIT CONTENTS

Each kit contains:

- 10 bottles of freeze-dried CN (*Pseudomonas*) Supplement
- 1 Instruction sheet

PRINCIPLE OF THE METHOD

CN (*Pseudomonas*) Supplement is recommended for the selective isolation of *Pseudomonas aeruginosa*. The formula for the supplement was described by Goto and Enomoto who demonstrated that the addition of nalidixic acid at a concentration of 15 µg/ml with the anionic surfactant cetrimide at only 200 µg/ml, increased the efficiency of the medium.

COMPOSITION

CN (<i>Pseudomonas</i>) Supplement		
	Contents / bottle	Contents / l of medium
Cetrimide	100.0 mg	200.0 mg
Nalidixic acid	7.5 mg	15.0 mg

PROCEDURE FOR USE

1. Aseptically reconstitute the contents of a bottle of CN (*Pseudomonas*) Supplement with 2 ml of a solution of sterile distilled water and ethanol in the ratio 1: 1. Shake until completely dissolved, avoiding foam formation.
2. Aseptically add the entire contents of a bottle (2 ml) to 500 ml of Pseudomonas Agar Base medium code 610071-620071, supplemented with 5 ml of Glycerol Supplement (code 80021), autoclaved and cooled to 45-50 °C.
3. Mix with care.
4. Distribute into Petri dishes.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical documentation for PSEUDOMONAS AGAR BASE code 610071 or 620071.

QUALITY CONTROL

1. Control of the appearance: freeze-dried product, colour white.
2. Microbiological control.

Prepare plates using as base PSEUDOMONAS AGAR BASE code 610071 or 620071 supplemented with Glycerol Supplement (code 80021, 5 ml in 500 ml of medium) and with CN (*Pseudomonas*) Supplement (1 bottle in 500 ml of medium). The plates are seeded with the strains indicated in the microbiological control table.

Incubation conditions: 24 h at 36±1 °C.

Microbiological control

Control strains		Growth
<i>Burkholderia cepacia</i>	ATCC 25609	Partially inhibited
<i>Pseudomonas aeruginosa</i>	ATCC 9027	Good
<i>Pseudomonas aeruginosa</i>	ATCC 27852	Good
<i>Pseudomonas putida</i>	ATCC 12633	Good
<i>Staphylococcus aureus</i>	ATCC 25923	Inhibited
<i>Proteus vulgaris</i>	ATCC 13315	Partially inhibited

PRECAUTIONS

The product CN (*Pseudomonas*) Supplement is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use.

CN (*Pseudomonas*) Supplement is a selective supplement to be used only for *in vitro* diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

Store CN (*Pseudomonas*) Supplement at 2-8 °C in its original packaging. In such conditions CN (*Pseudomonas*) Supplement will remain valid until the expiry date indicated on the label. Do not use beyond that date. Eliminate without using if there are signs of deterioration.

REFERENCES

- King, E.O., M.K. Ward, and D.E. Raney (1954). Two simple media for the demonstration of pyocyanin and fluorescin. J. Lab. Clin. 44, 301.
- Goto S. and Enomoto S. (1970) Jap. J. Microbiol. 14: 65-72.
- Lowbury E.J. And Collins A.G. (1955) J. Clin. Path. 8: 47-48.

PRESENTATION

product	REF	Σ
CN (<i>Pseudomonas</i>) Supplement	81006	10 bottles

One bottle is sufficient to prepare 500 ml of medium

TABLE OF SYMBOLS

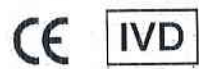
IVD In Vitro Diagnostic Medical Device	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	LOT Batch code



LIOFILCHEM Bacteriology Products

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Rev.0 / 06.04.2005

lot 15 no 21



Muller Kauffmann Tetrathionate Broth Base

Basal medium for detection of *Salmonella* spp from foodstuffs and environmental samples, according to ISO 6579.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Casein	8,5
Meat Extract	4,3
Sodium Chloride	2,6
Calcium Carbonate	38,7
Sodium Thiosulfate anhydrous	30,5*
Ox Bile	4,78
Brilliant Green	0,086
Final pH: 8,2 ± 0,2 at 25°C	

*Equivalent to 47,9 g of sodium thiosulfate pentahydrate.

DESCRIPTION
Muller Kauffmann Tetrathionate Broth Base is used with supplements for the selective enrichment of *Salmonellae* in food and environmental samples. The medium is formulated in compliance with ISO 6579 requirements.

PRINCIPLE
Enzymatic digest of casein and meat extract provide amino acids, nitrogen, carbon, vitamins and minerals. Sodium chloride maintains the osmotic balance of the medium. Calcium carbonate is the buffer. Sodium thiosulfate is included to produce tetrathionate after adding bile to the medium. Organisms-reducing tetrathionate, such as *Salmonella*, grow luxuriant while most faecal organisms are inhibited. Bile promotes the growth of *Salmonella* while inhibiting the contaminant bacterial flora. Brilliant green suppresses primarily Gram-positive bacteria. Novobiocin is added to inhibit Gram-positive bacteria.

PREPARATION
Suspend 89,5 g of powder in 1 liter of deionized or distilled water. Heat with frequent agitation and boil for 5 minutes to completely dissolve the powder. DO NOT AUTOCLAVE. Cool up to 45-50°C. Aseptically, add the contents of 2 tubes (20 ml) of Iodine MKTT Solution (ref. 80009). Also add the contents of 2 vials of Novobiocin MKTT Supplement (ref. 81073) each reconstituted with 5 ml sterile distilled water. Mix well. Dispense into sterile containers.

TECHNIQUE
For pre-enrichment, add the sample to Buffered Peptone Water (ref. 414020) at a ratio of 1:9 (e.g. 25 g per 225 ml), homogenize well and incubate at 37 ± 1°C for 16-20 h.
Transfer 1 ml of the pre-enrichment culture to 10 ml of Muller Kauffmann Tetrathionate Broth. Incubate at 37 ± 1°C for 18-24 h.

INTERPRETATION OF RESULTS
Turbidity indicates microbial growth.
Presumptive identification is achieved by subculture onto XLD Agar (ref. 10056) and a second *Salmonella* agar of choice such as Chromatic *Salmonella* (ref. 11614). Characteristic presumptive *Salmonella* colonies should be confirmed with biochemical and serological tests.

STORAGE
The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment. In its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS
The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE
Disposal of waste must be carried out according to the national and local regulations in force.

- REFERENCES**
- ISO 6579:2002. Microbiology of food and animal feeding stuffs – Horizontal method for the detection of *Salmonella* spp.
 - Desmet J.M., R. Bouterijk, H. Rind and D. Lautenschlager (1986) Rapid *Salmonella* detection in food by motility enrichment on a modified agar. *Journal of Food Protection* 49:510-514.
 - Asalladis P., J. Appl. Bacteriol. 44:233-239.
 - Rappaport F., N. Konforti and B. Navon (1956) A new enrichment medium for certain salmonellae. *J. Clin. Pathol.* 9:261-266.

PRODUCT SPECIFICATIONS

NAME
Muller Kauffmann Tetrathionate Broth Base

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

PACKAGING	Content	Packaging
Ref. 610239	500 g	500 g of powder in plastic bottle
E20239	100 g	100 g of powder in plastic bottle

PH OF THE MEDIUM
8,2 ± 0,2

USE
Muller Kauffmann Tetrathionate Broth Base is used with supplements for the selective enrichment of *Salmonellae* in food and environmental samples. The medium is formulated in compliance with ISO 6579 requirements

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Powder medium

Appearance: free-flowing, homogeneous
Colour: pale green
Refract: 1,030 medium
Appearance: opaque
Colour: very pale green

SHELF LIFE
4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Incubation conditions: 18-24 hours at 37 ± 1°C
Inoculum for productivity: <100 CFU

Microorganism	Growth	Specification
<i>Salmonella Typhimurium</i> + <i>Escherichia coli</i>	Good	>10 colonies on XLD agar or other medium of choice
+ <i>Pseudomonas aeruginosa</i>	WDCM 00013 WDCM 00025	

Inoculum for selectivity: >10⁶ CFU

Microorganism	Growth	Specification
<i>Escherichia coli</i>	WDCM 00013	Partially inhibited
<i>Enterococcus faecalis</i>	WDCM 00009	Partially to completely inhibited

TABLE OF SYMBOLS

LOT	Batch code	Do not reuse	Manufacturer	Use by	Fragile, handle with care
REF	Catalogue number	Temperature limitation	Contains sufficient for <-> tests	Caution, consult instructions for use	



Lot 15 no 2

ENGLISH

NOVOBIOCIN MKTT Supplement

Selective supplement for the detection of *Salmonella* spp.

DESCRIPTION
NOVOBIOCIN MKTT Supplement is a selective supplement for the detection of *Salmonella* spp, used for enrichment of MULLER KAUFFMANN BROTH BASE cod. 610239 or 620239.

KIT CONTENTS
Each kit contains:
• 10 bottles of NOVOBIOCIN MKTT Supplement freeze-dried
• 1 Instruction sheet

PRINCIPLE OF THE METHOD
Novobiocin is an antibiotic effective against both Gram-negative and Gram-positive bacteria.

COMPOSITION

NOVOBIOCIN MKTT Supplement		
	Contents / bottle	Contents / l of medium
Novobiocin	20.0 mg	40.0 mg

PROCEDURE FOR USE

1. Reconstitute the contents of a bottle of NOVOBIOCIN MKTT Supplement aseptically with 5 ml of sterile distilled water. Shake until completely dissolved, avoiding foam formation.
2. Add the entire contents of a bottle (5 ml) aseptically to 500 ml of MULLER KAUFFMANN BROTH BASE cod. 610239 or 620239, boiled, cooled to 45-50°C and added with IODINE MKTT SOLUTION.
3. Mix with care.
4. Distribute into sterile tubes.

TECHNIQUE AND INTERPRETATION OF THE RESULTS
Refer to the technical documentation of MULLER KAUFFMANN BROTH BASE cod. 610239 or 620239.

QUALITY CONTROL
1. Control of the appearance: a white freeze-dried product.
2. Microbiological control.

Prepare the tubes using as base MULLER KAUFFMANN BROTH BASE cod. 610239 or 620239 enriched with NOVOBIOCIN MKTT Supplement (1 bottle in 500 ml of medium) and IODINE MKTT SOLUTION. The tubes are seeded with the strains indicated in the microbiological control table.
Incubation conditions: 24 ± 3 h at 37 ± 1 °C

Microbiological control

Control strains		Growth
<i>Salmonella typhimurium</i>	ATCC 14028	Good
<i>Escherichia coli</i>	ATCC 25922	Inhibited
<i>Salmonella seftenberg</i>	ATCC 10384	Good

PRECAUTIONS
The product NOVOBIOCIN MKTT Supplement is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use.
NOVOBIOCIN MKTT Supplement is a selective supplement to be used in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE
Store NOVOBIOCIN MKTT Supplement at 2-8°C in its original packaging. Keep away from sources of heat and avoid excessive changes of temperature. In such conditions NOVOBIOCIN MKTT Supplement maintains its validity until the expiry date indicated on the label. Eliminate without using if there are signs of deterioration.

REFERENCES

- DeSmedt, Bolderdijk, Rappold and Lautenschlaeger. 1986. J. Food Prot. 49:510.
- Dusch and Altwegg. 1995. J. Clin. Microbiol. 33:802.
- Aspinall, Hindle and Hutchinson. 1992. Eur. J. Clin. Microbiol. Infect. Dis. 11:936.

PRESENTATION

Product	REF	
NOVOBIOCIN MKTT Supplement	81073	10 bottles

One bottle is sufficient to prepare 500 ml of medium

TABLE OF SYMBOLS

Batch code	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	



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Rev.0/ 07.07.2009

Lot 16 10271



CHROMATIC SALMONELLA

Chromogenic selective medium for isolation and differentiation of *Salmonella* spp. (including *S. typhi*).

TYPICAL FORMULA (g/L)	
Peptone	7.0
Yeast Extract	3.0
Meat Extract	1.0
Sodium Chloride	5.0
Chromogenic mix	3.7
Agar	15.0
Final pH 7.5± 0.2	

DESCRIPTION
Chromogenic selective medium for isolation and differentiation of *Salmonella* spp., including *S. typhi*, directly from clinical and industrial samples.

PRINCIPLE
Protease Peptone and meat extract provide amino acids and proteins. Yeast extract is a source of amino acids and vitamins of group B. Sodium chloride maintains the osmotic balance of the medium. The special chromogenic mix allows to differentiate *Salmonella* spp., including *S. typhi*, from other coliform and non-coliform bacteria, on the basis of the colour and the morphology of the colonies. Beside the chromogenic mix inhibits Gram-positive microorganisms. Tween 20 increases microbial growth.

PREPARATION
Suspend 34.7 g of powder in 1 L of sterile distilled or deionized water. Add 3 mL of Tween 20 Supplement (cod. 80032). Heat until completely dissolved. Sterilize at 100°C for 5 minutes. Dispense in petri dishes.

TECHNIQUE
Inoculate the plates by streaking the specimen onto the surface of the medium using a sterile loop.
Incubate at 35±2°C for 18-24 hours.

INTERPRETATION OF RESULTS
Salmonella typhimurium and other *Salmonella* species will appear as light mauve - colored colonies. *Citrobacter* and other coliforms will appear as light blue-green to blue-green colored colonies. Some organisms that do not hydrolyze any of the chromogenic compounds may appear as colorless colonies. Final identification must be performed by biochemical and/or serological tests.

STORAGE
The powder is very hygroscopic; store the powder at 10-30 °C, in a dry environment, in its original container tightly closed until the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared media at 2-8 °C.

WARNING AND PRECAUTIONS
The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥1%. The product is designed for *in vitro* diagnostic use and must be used only by properly trained operators.

DISPOSAL OF WASTE
Disposal of waste must be carried out according to national and local regulations in force.

REFERENCES

- Bopp, Brenner, Wells and Stroobins, 1999. In Murray, Baron, Pfaller, Tencover and Tenk (ed.), *Manual of clinical microbiology*, 7th ed. American Society for Microbiology, Washington, DC.
- D'Aoust, Murray and Bailey, 2001. In Doyle, Beuchat, and Montville (ed.) *Food microbiology: fundamentals and frontiers*, 2nd ed. American Society for Microbiology, Washington, DC.



PRODUCT SPECIFICATIONS

NAME
CHROMATIC SALMONELLA

PRESENTATION
Dehydrated culture medium

STORAGE
10-30 °C

PACKAGING	Content	Packaging
Code	1500 g	500 g of powder in plastic bottle
E20811	100 g	100 g of powder in plastic bottle

PH OF THE MEDIUM
7.5 ± 0.2

USE
Chromogenic selective medium for isolation and differentiation of *Salmonella* spp., including *S. typhi*, directly from clinical and industrial samples.

TECHNIQUE
Refer to technical sheet of the product.

APPEARANCE OF THE MEDIUM
Dehydrated medium
Appearance: free-flowing, homogeneous.
Colour: beige
Enriched medium
Appearance: clear
Colour: beige

SHELF LIFE
2 years

QUALITY CONTROL

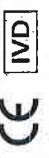
- Control of general characteristics, label and print
- Microbiological control

Inoculum for productivity: 10⁷-10⁸ UFC/ml
Inoculum for selectivity: 10⁷-10⁸ UFC/ml
Inoculum for specificity: 5⁷sp. UFC/ml
Incubation conditions: 18-24 hours at 35±2°C

Microorganisms	Growth	Colour
<i>Escherichia coli</i>	ATCC 25922 Good	Colorless
<i>Salmonella enterica</i> subspecies <i>enteritidis</i>	ATCC 13314 Good	Mauve
<i>Salmonella typhimurium</i>	ATCC 14820 Good	Mauve
<i>Proteus mirabilis</i>	ATCC 25953 Good	Colorless
<i>Pseudomonas aeruginosa</i>	ATCC 27853 Good	Colorless
<i>Staphylococcus aureus</i>	ATCC 25923 Inhibited	

TABLE OF SYMBOLS

LOT	Batch code	Temperature limitation	Manufacturer	Contains sufficient for <rs> tests
REF	Catalogue number	Keep away from heat	Use by	Caution, consult accompanying documents



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Tween 20 Supplement

Supplement for the enrichment of culture media.

Lot 16 n032

ENGLISH

DESCRIPTION

Tween 20 Supplement is a nonionic surfactant derived from sorbitan ester, used for the preparation of TAT Broth Base (ref. 610093, 620093), Chromatic Salmonella (ref. 610611, 620611) and other culture media for which the addition of polysorbate 20 is recommended.

KIT CONTENTS

Each kit contains:

- Bottles of Tween 20 Supplement
- 1 instructions sheet

PRINCIPLE OF THE METHOD

Polysorbate 20 neutralizes preservatives in cosmetics or pharmaceutical products, allowing bacteria to grow. It has also shown a growth-promoting effect on certain microorganisms.

COMPOSITION

	Content / bottle
Polysorbate 20	50 ml

PROCEDURE FOR USE

1. Add Tween 20 Supplement to the basal medium to obtain the correct final concentration.
2. Mix with care.
3. Sterilize in autoclave according to relevant instructions.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical sheet of the medium being prepared.

QUALITY CONTROL

1. Visual inspection: dense, oily, yellowish liquid.
2. Microbiological control.

Prepare TAT Broth Base per label directions. Inoculate with the microbial strains indicated below and incubate at $35 \pm 2^\circ\text{C}$ for 18-48 h.

Control strains		Growth
<i>Bacillus subtilis</i>	ATCC® 6633	Good
<i>Pseudomonas aeruginosa</i>	ATCC® 27853	Good
<i>Staphylococcus aureus</i>	ATCC® 25923	Good

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for professional use only and must be used by properly trained operators.

STORAGE AND TRANSPORT CONDITIONS

2-8°C away from light, until the expiry date on the label. However, our stability studies have shown that the storage or transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, do not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

REFERENCES

- The United States Pharmacopeial Convention (1995) The United States pharmacopeia, 23rd ed. Microbial limits tests, p. 1681-1686. The United States Pharmacopeial Convention Inc., Rockville, MD.
- Orth, D. S. (1993) Handbook of cosmetic microbiology. Marcel Dekker, Inc., New York, N.Y.
- Food and Drug Administration (1969) Procedure for the examination of topical drugs and cosmetics. FDA, Rockville, MD.

PRESENTATION

Product	Ref.	Content
Tween 20 Supplement	80032	2 x 50 ml bottles
Tween 20 Supplement	80432	4 x 50 ml bottles

TABLE OF SYMBOLS

LOT Batch code	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	



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Rev.2 / 18.01.2016

Lot 17 po 7 /



UREA AGAR BASE

Medium for urease test, recommended by ISO 6785 and IDF 93.

TYPICAL FORMULA	(g/l)
Peptone	1.0
Glucose	1.0
Sodium Chloride	5.0
Monopotassium Phosphate	2.0
Phenol Red	0.012
Agar	15.0
Final pH 6.8 ± 0.2 at 25°C	

DESCRIPTION
UREA AGAR BASE is a medium used for urease test, recommended by ISO 6785 and IDF 93.

PRINCIPLE
Peptone provides nitrogen, carbon, and amino acids required for organism growth. Glucose is an energy source. Sodium chloride maintains the osmotic balance of the medium. Monopotassium phosphate is the buffer. Phenol red is the pH indicator. Agar is the solidifying agent. Urea is added to the medium as substrate for urease enzyme. The splitting of urea by urease causes the release of ammonia, increasing pH of the medium to the alkaline side. This is indicated by a color change of the pH indicator.

PREPARATION
Suspend 24.0 g of powder in 950 ml of distilled or deionized water. Heat until completely dissolved. Autoclave at 121°C for 15 minutes. Cool to 45-50°C. Aseptically add 50 ml of Urea 40% Supplement (ref. 80292). Dispense into sterile tubes and allow to solidify in a slanting position.

TECHNIQUE
Use a heavy inoculum of the growth from a pure 18-24 hours culture. Inoculate by streaking back and forth over the entire slant surface. Do not stab the butt because it serves as color control. Incubate the tubes with the caps loosened at 36 ± 1°C for 6-24 hours. Longer period of incubation may not be necessary.

INTERPRETATION OF RESULTS
The production of urease is a positive reaction, indicated by an intense red or pink color on the slant.

STORAGE
The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container, tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS
The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for *in vitro* diagnostic use and must be used by properly trained operators only.

DISPOSAL OF WASTE
Disposal of waste must be carried out according to national and local regulations in force.

- REFERENCES**
1. Chmielewski, W.B. (1946). J. Bact. 52:461-465.
 2. Mastern, L.G.C. (1952) Brit. Med. J. 2:545-546.
 3. ISO 6785:2001, IDF 93:2001.



PRODUCT SPECIFICATIONS

NAME
UREA AGAR BASE

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

PACKAGE

Ref.	Content	Packaging
610107	500 g	500 g of powder in plastic bottle
620107	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
6.8 ± 0.2

USE
UREA AGAR BASE is a medium used for urease test, recommended by ISO 6785 and IDF 93.

TECHNIQUE
Refer to technical sheet of the product.

APPEARANCE OF THE MEDIUM
Dehydrated medium
Appearance: free-flowing, homogeneous
Colour: orange
Prepared medium
Appearance: slightly opalescent
Colour: reddish-orange

SHELF LIFE
4 years

QUALITY CONTROL

1. Control of general characteristics, label and print
2. Microbiological control
Inoculum for productivity: 10-100 CFU/ml
Incubation conditions: 6-24 h at 36 ± 1°C.

Microorganism	ATCC®	Urease Production
<i>Proteus vulgaris</i>	13315	+
<i>Escherichia coli</i>	25922	

TABLE OF SYMBOLS

	Batch code		In vitro Diagnostic Medical Device		Manufacturer		Use by		Fragile, handle with care
	Catalogue number		Temperature limitation		Contains sufficient for n tests		Consult instructions for use		Keep away from heat sources





UREA 40% Supplement

Lot 17 part 2

ENGLISH

Supplement for the detection of urease activity of bacteria

DESCRIPTION

UREA 40% Supplement is a supplement per la detection of urease activity of bacteria and it is made of a 40% urea aqueous solution for microbiological use. UREA 40% Supplement is used for the enrichment of medium Urea Agar Base cod. 610107 or 620107.

KIT CONTENTS

Each kit contains:

- 10 bottles each containing 5 ml of UREA 40% Supplement.
- 1 Instruction sheet

PRINCIPLE OF THE METHOD

The utilization of urea by microorganisms provided of urease causes the alkalization of medium and consequently the colour turning of indicator red phenol from amber to pink colour.

COMPOSITION

UREA 40% Supplement	
Contents / bottle	Contents / l of medium
Urea	2.0 g / 20.0 g

PROCEDURE FOR USE

1. Aseptically take the content of one bottle of UREA 40% Supplement and add it to 95 ml of Urea Agar Base cod. 610107 or 620107 autoclaved and cooled to 45-50 °C.
2. Mix with care avoiding the formation of foam.
3. Distribute into the final containers.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical documentation for medium Urea Agar Base cod. 610107 or 620107.

QUALITY CONTROL

1. Control of the appearance: clear, colourless solution.
2. Microbiological control:
prepare the plates using as base the medium Urea Agar Base cod. 610107 or 620107 added with UREA 40% Supplement.
The plates are inoculated with the strains indicated in the table of microbiological control.
Conditions of incubation: 6-24 h at 36 ± 1 °C.
Microbiological control:

Control strains	Ureasic activity
<i>Proteus vulgaris</i> <i>Escherichia coli</i>	ATCC 13315 ATCC 25922
	Positive / pink medium Negative / no change in colour

PRECAUTIONS

The product UREA 40% Supplement is classified as irritant under current legislation;; it is recommended that the Safety Data Sheet be consulted on its correct use.
UREA 40% Supplement is a supplement to be used only for *in vitro* diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

Store UREA 40% Supplement at 2-8°C in its original packaging. In such conditions UREA 40% Supplement maintains its validity until the expiry date indicated on the label. Non utilizzare oltre questa data. Eliminate without using if there are signs of deterioration.

REFERENCES

- Christensen, W.B. (1946). J. Bact. **52**: 461-466.
- Maslen, L.G.C. (1952). Brit. Med. J. **2**: 545-546.

PRESENTATION

product	REF	Σ
UREA 40% Supplement	80292	10 bottles

One bottle is sufficient to prepare 100 ml of medium

TABLE OF SYMBOLS

IVD In Vitro Diagnostic Medical Device	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	LOT Batch code



LIOFILCHEM Bacteriology Products

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Rev.0 / 06.04.2005

807 18

807 1



CHROMATIC™ MRSA AGAR BASE

Chromogenic selective medium for the isolation of methicillin-resistant *Staphylococcus aureus*.

COMPOSITION	
Peptone and Yeast Extract	30.0
Sodium Chloride	10.0
Sodium Phosphate Dibasic	2.5
Selective and Matting Agents	16.5
Agar	15.0
Final pH @ g ± 0.2	

DESCRIPTION
CHROMATIC™ MRSA AGAR BASE is a chromogenic selective medium used for the isolation of methicillin/oxacillin resistant *S. aureus*.

PRINCIPLE
Peptone and yeast extract supply amino acids, nitrogen, carbon, minerals, vitamins and other nutrients which support the growth of microorganisms. The chromogenic character of growth of *S. aureus*. Sodium phosphate is the buffer. Selective agents inhibit the growth of yeast and the most of Gram-negative and Gram-positive bacteria other than methicillin-resistant staphylococci. Matting agents enhance colonies contrast on the medium. Agar is the solidifying agent.
The medium must be supplied with Chromatic™ MRSA Supplement (ref. 810703). This supplement consists of a chromogenic and antibiotic mix that allows the optimal recovery of MRSA and the identification based on a mauve or orange-mauve coloration of the colonies.

PREPARATION
Suspend 74.0 g of powder in one liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Sterilize at 121°C for 15 minutes. Cool up to 45-50°C. Aseptically, add 10 ml (2 vials) previously reconstituted Chromatic™ MRSA Supplement (ref. 810703). Pour in Petri dishes.

TECHNIQUE
Inoculate the plates by streaking directly the specimen onto the agar surface. Incubate aerobically at 35 ± 2°C for 18-24 hours.

INTERPRETATION OF RESULTS
S. aureus produces mauve to orange-mauve colonies. Most gram-positive bacteria, if not inhibited, will produce white colonies. Gram-negative organisms and yeast are partially to completely suppressed.

STORAGE AND TRANSPORT CONDITIONS
The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment. In its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS
The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for in vitro diagnostic use only and must be used by properly trained operators.

DISPOSAL OF WASTE
Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES
1. Evaluation of CHROMagar Staph aureus, a new chromogenic medium, for isolation and presumptive identification of *Staphylococcus aureus* from human clinical specimens. Gallot O, et al. 2001. Journal of Clinical Microbiology, 38 : 1587-1591.
2. Diagnostique nasal de *Staphylococcus aureus*. Necessité de standardiser les protocoles. Laudat P, et al. 2000. Poster 343/P2, presented at RICA1 in Paris (France).



PRODUCT SPECIFICATIONS

NAME
CHROMATIC™ MRSA AGAR BASE

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

PACKAGING

Ref.	Content	Packaging
610615	500 g	500 g of powder in plastic bottle
620615	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
6.9 ± 0.2

USE
CHROMATIC™ MRSA AGAR BASE is a chromogenic selective medium used for the isolation of methicillin/oxacillin resistant *S. aureus*

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Powder medium
Appearance: free-flowing, homogeneous
Colour: beige
Ready-to-use medium
Appearance: opaque
Colour: whitish

SHELF LIFE
2 years

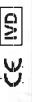
QUALITY CONTROL
1. Control of general characteristics, label and print
2. Sterility control
7 days at 22 ± 1°C, in aerobiosis
7 days at 36 ± 1°C, in aerobiosis

3. Microbiological control
Inoculum for productivity: 10-100 CFU/ml
Inoculum for selectivity: 10⁷-10⁸ CFU/ml
Inoculum for specificity: ≤10⁶ CFU/ml
Incubation Conditions: 18-24 h at 35 ± 2°C, in aerobiosis

Microorganism	Growth	Colony colour
<i>Staphylococcus aureus</i> (MRSA)	ATCC® 43300 Good	Mauve
<i>Staphylococcus aureus</i> (MSSA)	ATCC® 25923 Inhibited	—
<i>Staphylococcus aureus</i> (MSSA)	ATCC® 6538 Inhibited	—
<i>Escherichia coli</i>	ATCC® 25922 Inhibited	—
<i>Proteus mirabilis</i>	ATCC® 25933 Inhibited	—
<i>Pseudomonas aeruginosa</i>	ATCC® 27853 Inhibited	—

TABLE OF SYMBOLS

LOT Batch code	IVD In vitro Diagnostic Medical Device	Manufacturer	Use by	Fragile, handle with care
REF Catalogue number	Temperature limitation	Contains sufficient for <-> tests	Caution, consult instructions for use	Do not reuse





Chromatic™ MRSA Supplement

Selective supplement for the isolation of methicillin-resistant *Staphylococcus aureus*.

Lot 18
p07 2

ENGLISH

DESCRIPTION

Chromatic™ MRSA Supplement is a selective lyophilized supplement used for the preparation of Chromatic™ MRSA Agar Base (Ref. 610615, 620615). The complete medium is used for the isolation of methicillin/oxacillin resistant *Staphylococcus aureus*.

KIT CONTENTS

Each kit contains:

- 10 vials of lyophilized Chromatic™ MRSA Supplement
- 1 instructions sheet

PRINCIPLE OF THE METHOD

The chromogenic and antibiotic mix allows the optimal recovery of MRSA and the identification based on a mauve or orange-mauve coloration of the colonies.

COMPOSITION

	Content / vial	Content / liter of medium
Miscela Cromogenica ed Antibiotica	0.4 g	0.8 g

PROCEDURE FOR USE

1. Reconstitute aseptically the content of one vial of Chromatic™ MRSA Supplement with 5 ml of sterile distilled water
2. Mix to complete dissolution and add aseptically to 500 ml of Chromatic™ MRSA Agar Base (Ref. 610615, 620615) autoclaved and cooled at 45-50°C.
3. Mix with care and pour into Petri dishes.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical sheet of the medium being prepared.

QUALITY CONTROL

1. Visual inspection: whitish button, clear pinkish solution, once reconstituted.
2. Microbiological control.
Prepare the medium per label directions. Inoculate the plates with the microbial strains indicated below and incubate at 35±2°C for 18-24 h.

Control strains		Growth	Colony color
<i>Staphylococcus aureus</i> (MRSA)	ATCC® 43300	Good	Mauve
<i>Staphylococcus aureus</i> (MSSA)	ATCC® 25923	Inhibited	---

WARNING AND PRECAUTIONS

The product does not contain hazardous substances in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is intended for *in vitro* Diagnostic Use only and must be used by properly trained operators.

STORAGE AND TRANSPORT CONDITIONS

2-8°C away from light, until the expiry date on the label. However, our stability studies have shown that the storage or transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, do not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

REFERENCES

- Evaluation of CHROMagar Staph aureus, a new chromogenic medium, for isolation and presumptive identification of *Staphylococcus aureus* from human clinical specimens. Gaillot O. *et al.* 2001. Journal of Clinical Microbiology, 38 : 1587-1591.
- Dépistage nasal de *Staphylococcus aureus*. Nécessité de standardiser les protocoles. Laudat P. *et al.* 2000 Poster 343/P2 presented at RICAI in Paris (France).

PRESENTATION

Product	Ref.	Content
Chromatic™ MRSA Supplement	81078	10 vials

TABLE OF SYMBOLS

LOT Batch code	IVD <i>In vitro</i> Diagnostic Medical Device	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
REF Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	Do not reuse



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Rev.3 / 06.05.2014



Yersinia Selective Agar Base
Differential and selective medium for the isolation of *Y. enterocolitica* from clinical and nonclinical specimens, according to ISO 10273.

TYPICAL FORMULA	(g/l)
Enzymatic Digest of Gelatin	17,0
Enzymatic Digest of Casein and Animal Tissues	3,0
Yeast Extract	2,0
Sodium Chloride	1,0
Sodium Pyruvate	2,0
Magnesium Sulfate	0,01
Mannitol	20,0
Sodium Deoxycholate	0,5
Crystal Violet	0,001
Neutral Red	0,03
Agar	14,0

Final pH 7,4 ± 0,2 at 25°C

DESCRIPTION
Yersinia Selective Agar Base is a medium used with supplements for the selective isolation and differentiation of *Yersinia enterocolitica*. The complete medium (CM agar) is recommended by ISO 10273 for the examination of food and animal feed stuffs as well as environmental samples in the area of food production and food handling.

PRINCIPLE
Enzymatic digest of gelatin and enzymatic digest of casein and animal tissues provide amino acids, nitrogen, carbon, minerals, vitamins and other nutrients which support the growth of organisms. Yeast extract is a source of vitamins, particularly of B-group. Sodium chloride maintains the osmotic pressure of the medium. Sodium pyruvate and magnesium sulfate stimulate organisms growth. Mannitol is the carbohydrate which allows to differentiate between mannitol fermenting and non-fermenting bacteria. Sodium deoxycholate and crystal violet inhibit Gram-positive bacteria. Neutral red is the pH indicator. Agar is the solidifying agent.

Supplementation with Yersinia Supplement (ref. 61039), containing cefsulodin, tigasean (fridocan) and novobiocin, inhibits the growth of most Gram-negative enteric bacteria.

PREPARATION
Suspend 39,6 g of powder in 1 liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Sterilize at 121°C for 15 minutes. Cool up to 45-50°C. Aseptically add the contents of 2 vials (6 ml) of Yersinia Supplement reconstituted as directed in the instructions for use that accompany the product. Pour in Petri dishes.

TECHNIQUE
Inoculate the specimen onto the medium by either direct plating or pour plating (*). Incubate aerobically at 30 ± 1°C for 18-24 h. (*) The ISO method for the detection of presumptive pathogenic *Yersinia enterocolitica* recommends to first perform enrichment in Peptone, Sorbitol and Bile Salts (PSB) Broth for 48-72 hours at 22-25°C with agitation, or 5 days without agitation.

INTERPRETATION OF RESULTS
Ingrains fermenting mannitol cause a localized pH reduction, forming colonies with red centre surrounded by a transparent border (characteristic "bull's-eye" colony). Organisms that do not ferment mannitol form colorless, translucent colonies. Some strains of *Serratia Chrobacter* and *Enterobacter* may give a colonial morphology resembling *Yersinia enterocolitica*. Final identification should be confirmed by standard biochemical tests.

STORAGE AND TRANSPORT CONDITIONS
The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS
The product does not contain hazardous substances, in concentrations exceeding the limits set by current legislation and therefore is not classified as dangerous. It is nevertheless recommended to consult the safety data sheet for its correct use. The product is designed for *in vitro* diagnostic use only and must be used by properly trained operators.

DISPOSAL OF WASTE
Disposal of waste must be carried out according to the national and local regulations in force.

- REFERENCES**
- EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
 - ISO 10273:2003. Microbiology of food and animal feeding stuffs – Horizontal method for the detection of presumptive pathogenic *Yersinia enterocolitica*.
 - Schleiman, D.A. (1979) Synthesis of a selective agar medium for *Yersinia enterocolitica*. Can. J. Microbiol. 25:1298-1304.
 - Schleiman, D.A. (1980) *Yersinia enterocolitica*: Observation on some growth characteristics and response to selective agents. Can. J. Microbiol. 43:14-27.
 - Devensh, J.A., and D.A. Schleiman (1981) An abbreviated scheme for identification of *Yersinia enterocolitica* isolated from food enrichments on CIN (cefsulodin-tigasean-novobiocin) agar. Can. J. Microbiol. 27:937-941.



dot 19 pot 1



PRODUCT SPECIFICATIONS

NAME
Yersinia Selective Agar Base

PRESENTATION
Dehydrated medium

STORAGE
10-30°C

PACKAGING	Content	Packaging
Ref.	500 g	500 g of powder in plastic bottle
E20111	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM
7,4 ± 0,2

USE
Yersinia Selective Agar Base is a differential and selective medium used with supplements for the isolation of *Yersinia enterocolitica* from clinical specimens and other types of samples, according to ISO 10273

TECHNIQUE
Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM
Powder (medium)
Appearance: free-flowing, homogeneous
Colour: pink beige to beige
Consistency: free-flowing
Appearance after reconstitution: slightly opalescent
Colour: reddish-orange

SHELF LIFE
4 years

QUALITY CONTROL
1. Control of general characteristics, label and print
2. Microbiological control

Medium for sensitivity: 50-100 CFU
Incubation: 10⁴-10⁶ CFU
Incubation Conditions: 18-24 h at 30 ± 1°C, in aerobiosis

Microorganism	Growth	Colony Appearance
<i>Yersinia enterocolitica</i>	Good	Colonies with red center
<i>Escherichia coli</i>	Partially to totally inhibited	—
<i>Staphylococcus aureus</i>	Inhibited	—

TABLE OF SYMBOLS	
LOT Batch code	IVD In vitro Diagnostic Medical Device
REF Catalogue number	Temperature limitation
Manufacturer	Contains sufficient for <-> tests
Use by	Caution, consult instructions for use
Fragile, handle with care	Do not reuse





Lot 19
no 2

ENGLISH

Yersinia Supplement

Selective supplement for the isolation of *Yersinia enterocolitica*.

DESCRIPTION

Yersinia Supplement is a selective lyophilized supplement used for the preparation of Yersinia Selective Agar Base (ref. 610111, 620111). The complete medium is used for the isolation of *Yersinia enterocolitica* from clinical and nonclinical specimens.

KIT CONTENTS

Each kit contains:

- 10 vials of freeze-dried Yersinia Supplement
- 1 instruction sheet

PRINCIPLE OF THE METHOD

Yersinia Supplement is an antibiotic mix that inhibits the growth of most Gram-negative enteric bacteria.

COMPOSITION

Antibiotic	Content / vial	Content / liter of medium
Cefsulodin	7.5 mg	15.0 mg
Irgasan	2.0 mg	4.0 mg
Novobiocin	1.25 mg	2.5 mg

PROCEDURE FOR USE

1. Aseptically reconstitute the content of one vial of Yersinia Supplement with 2 ml sterile distilled water and 1 ml ethanol(*).
2. Mix to complete dissolution and add to 500 ml Yersinia Selective Agar Base, autoclaved and cooled to 45-50°C.
3. Mix well and dispense in Petri dishes.

(*): Ethanol 50% purity minimum.

TECHNIQUE AND INTERPRETATION OF THE RESULTS

Refer to the technical documentation of the medium being prepared.

QUALITY CONTROL

1. Control of the appearance: freeze-dried white in colour.
2. Microbiological control.

Prepare the medium per label directions. Inoculate the plates with the strains indicated below and incubate at 30 ± 1°C for 18-24 hours.

Control strains

Yersinia enterocolitica
Escherichia coli
Staphylococcus aureus

WDCM 00038
WDCM 00012
WDCM 00034

Growth

Good
Partially to totally inhibited
Inhibited

PRECAUTIONS

Yersinia Supplement is classifiable as hazardous under current legislation; it is recommended that the Safety Data Sheet be consulted on its use. The product is a selective supplement to be used only for *in vitro* diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE

2-8°C in its original packaging. Keep away from sources of heat and avoid excessive changes of temperature. Use until the expiry date indicated on the label. Eliminate without using if there are signs of deterioration. Once reconstituted, the product can be stored for a maximum duration of 30 days at -20°C, shielded from light.

REFERENCES

- EN ISO 11133:2014. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
- ISO 10273:2003. Microbiology of food and animal feeding stuffs – Horizontal method for the detection of presumptive pathogenic *Yersinia enterocolitica*.
- Schieman, D.A. (1979) Synthesis of a selective agar medium for *Yersinia enterocolitica*. Can. J. Microbiol. 25:1298-1304.
- Schieman, D.A. (1980) *Yersinia enterocolitica*: Observation on some growth characteristics and response to selective agents. Can. J. Microbiol. 43:14-27.
- Devenish, J.A., and D.A. Schieman (1981) An abbreviated scheme for identification of *Yersinia enterocolitica* isolated from food enrichments on CIN (cefesulodin-irgasan-novobiocin) agar. Can. J. Microbiol. 27:937-941.

PRESENTATION

Product	Ref.	Contents
Yersinia Supplement	81039	10 vials

One vial is sufficient to prepare 500 ml of medium.

TABLE OF SYMBOLS

In Vitro Diagnostic Medical Device	Do not reuse	Manufacturer	Contains sufficient for <n> tests	Temperature limitation
Catalogue number	Fragile, handle with care	Use by	Caution, consult accompanying documents	Batch code



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Rev.3 / 18.09.2015